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## PAPERS PRESENTED TO CONGRESS

### War-time Achievements of the British Home Veterinary Services*


(*A*) *by*

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At the early stage of the war it will be remembered that in the food production campaign the greatest emphasis was placed on the production of crops for direct consumption by the populace. However, it was not long until the importance of livestock was recognized; and the primary function of the veterinary service during the war has been to play its part in the conservation of foods of animal origin by the prevention of loss through disease. There has been the problem of preventing the introduction of disease from abroad in the face of the need for imports of foreign material, mainly meats; the effective handling of epizootic diseases of all classes of livestock and the control of the endemic and more insidious diseases, essentially on a short-time basis with a view to the maintenance of a good supply of home-produced foods, and with a marked emphasis on the importance of milk.

#### Introduction of Disease from Abroad

As you are all aware, the diseases of animals which are commonly introduced to Great Britain by imported food or feeding-stuffs are foot-and-mouth disease, swine fever and anthrax. It is of interest to record that in the case of anthrax the number of outbreaks during the war has been much lower than the average for the years between the two wars. A similar reduction was in evidence during 1914-18, and it is quite convincing circumstantial evidence that the great majority of our outbreaks arise from imported feeding-stuffs which were so greatly reduced during the war years. The average number of outbreaks for 1911-14 inclusive was 742, 1915-19 inclusive 409, 1920-39 inclusive 537, and 1940-45 inclusive 321. The position in regard to foot-and-mouth disease has not been so fortunate. Large quantities of foreign meat have been imported, and most of our initial outbreaks of foot-and-mouth disease have been among pigs and, generally speaking, among pigs fed on swill. In no case has it been recorded that pigs developed foot-and-mouth disease when fed on swill coming from American camps where North American meat provided the ration for the troops, whereas many outbreaks arose in pigs fed on swill originating in camps where imported South American meat was used. It has been quite definitely established that South American meat and pork are the sources of infection and one or two interesting confirmatory points have emerged. For instance, when a peculiar type of the disease was raging in Uruguay we experienced an outbreak in this country of a similar type.

In summing up the position about the introduction of infection during 1944, Cabot said in a paper to the Lancashire Division, N.V.M.A., at Liverpool, on May 4th, 1945:—

> "It has been shown experimentally that the virus will survive for months in frozen carcases.
>
> During 1944 a large number of outbreaks occurred among pigs fed on kitchen waste and outbreaks have occurred, not always among pigs, on the premises of butchers distributing imported meat.
>
> During the same period, there has been a virtual absence of disease in those limited parts of the country which are chiefly self-supporting in meat, and on farms where only centrally sterilized kitchen waste was used for feeding pigs.
>
> The association of disease with the imported meat trade either directly on butchers' premises or indirectly by the taking of swill in the raw state to piggeries indicates without any question the source of infection during the past year.

The only countries infected with foot-and-mouth disease from which any meat was imported into Great Britain during the period under review were the South American Republics, and there seems no room for doubt that it was from these countries that our repeated infections were derived.

Many of these initial outbreaks occurred in piggeries in built-up areas, and consequently, because of the paucity of livestock in such districts, there was little opportunity for the disease to spread, and also relatively very few markets were involved. Other centres, however, proved more troublesome. During the year all three types of virus were identified."

FOOT-AND-MOUTH DISEASE STATISTICS

*Nos. of Confirmed Outbreaks*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1934 .. | 79 | 1937 .. | 187 | 1940 .. | 160 | 1943 .. | 27 |
| 1935 .. | 56 | 1938 .. | 190 | 1941 .. | 264 | 1944 .. | 181 |
| 1936 .. | 67 | 1939 .. | 99 | 1942 .. | 670 | 1945 .. | 129 |

*Swill as an Origin*

| Year | Outbreaks confirmed | Initial or primary outbreaks | Primary outbreaks commencing in pigs | Primary outbreaks commencing in swill-fed pigs |
|---|---|---|---|---|
| 1939 | 99 | 23 | 8 | 7 |
| 1940 | 160 | 28 | 11 | 11 |
| 1941 | 264 | 16 | 6 | 6 |
| 1942 | 670 | 41 | 19 | 17 |
| 1943 | 27 | 6 | 2 | 2 |
| 1944 | 181 | 93 | 77 | 55 |
| 1945 | 129 | 66 | 62 | 56 |

In many primary outbreaks among cattle there has been a history of access to bones carried by dogs, meat wrappers, etc. Also, for the period under review, there have been 14 cases in which there was strong presumptive evidence that the cattle had had access to swill.

We have also experienced a number of outbreaks of swine fever which appear to have originated from imported pork. In this case, however, North American imports have been incriminated, and this is not surprising for one knows that the condition is only under control in the extensive pig rearing areas of America because of the use of the serum virus method of immunization.

SWINE FEVER

| Year | Pig population in thousands, to nearest thousand | No. of cases reported | No. of outbreaks confirmed | Outbreaks in which no connection traced with other outbreaks | Outbreaks where swill was fed to pigs |
|---|---|---|---|---|---|
| 1939 | 3,767 | 16,690 | 3,286 | 2,505 | • |
| 1940 | 3,631 | 17,385 | 5,019 | 3,980 | 1,169 |
| 1941 | 2,207 | 8,462 | 1,088 | 943 | 562 |
| 1942 | 1,872 | 6,448 | 451 | 321 | 341 |
| 1943 | 1,560 | 5,499 | 547 | 449 | 348 |
| 1944 | 1,638 | 8,771 | 1,449 | 1,207 | 701 |
| 1945 | 1,903 | 7,476 | 928 | 717 | 536 |

• Not recorded.

The only highly contagious diseases which have been introduced to this country in the war years are foot-and-mouth disease and swine fever, and in spite of an increased number of initial outbreaks, particularly in the case of foot-and-mouth disease, the normal machinery for coping with such outbreaks has been found adequate to control the disease, and there has been no extensive spread in any part of the country. Salvage of the carcases of animals slaughtered as contacts has been practised throughout the war period.

Rabies has not been introduced to the country in spite of the difficulty of controlling importations, particularly under the conditions prevailing when the Army returned from France at the time of the Dunkirk evacuation.

The number of dogs and cats imported into this country during the war years was lower than in previous years, but the work entailed was much greater owing to the comparatively large number of illegal importations.

The peak periods were after Dunkirk and the period after VE-Day.

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Just under 1,000 cats and dogs were known to have been brought informally to this country during 1940. From 1940 onwards, the position became more complicated by the fact that we had so many Allied camps in this country to which the troops brought the usual train of canine and feline pets. After VE-Day our own troops brought home their various pets, and it is known that approximately 200 dogs and cats were brought here in an unorthodox manner during 1945. The figures in the following table show the number of dogs and cats imported under the Importation of Dogs and Cats Order, 1928, during the last eight years.

| Year | Domestic dogs | Domestic cats | Other canines | Other felines | Totals |
|---|---|---|---|---|---|
| 1938 | 1,060 | 52 | 46 | 92 | 1,250 |
| 1939 | 1,048 | 51 | 43 | 34 | 1,176 |
| 1940 | 1,156 | 40 | — | — | 1,197 |
| 1941 | 70 | 4 | — | — | 74 |
| 1942 | 96 | 7 | — | — | 103 |
| 1943 | 156 | 14 | 1 | — | 171 |
| 1944 | 281 | 11 | — | — | 292 |
| 1945 | 659 | 15 | 8 | 11 | 693 |

It may be of interest to record that a scheme for the quarantine of Service pet dogs from overseas was established towards the end of the war and there is now a specially constructed establishment, accommodating 500 of these dogs, under the control of the R.A.V.C. at Chilbolton, Hants.

While discussing the importation of dogs and cats it will not be out of place to note that only three cases of rabies have occurred in this country during recent years and that all the cases were diagnosed in dogs undergoing detention in quarantine kennels. The details of these cases are as follows:—

*1938.* One dog from the Sudan, in quarantine nine days.
*1939.* One dog from India, in quarantine five weeks.
One dog from Egypt, in quarantine three months.

## The Control of Diseases Among Cattle, Particularly Dairy Cattle

When the war broke out, the Attested Herds Scheme had been in operation for four and a half years and notable progress had been made in eradication in some districts. At that time, there were 10,348 attested herds and 6,717 supervised herds. It was decided that it was impossible to cope with a large increase in the number of attested herds in war-time, with the limited staff available, but it was considered advisable to ensure that, so far as possible, the ground which had already been gained should be held. An arrangement was therefore made that only herds which were licensed to produce "T.T." milk should be accepted for addition to the Attested Herds Register and "assisted testing" was virtually discontinued. This situation maintained until July 1st, 1944, when the number of attested herds was 16,373, a figure closely approximating the total number of attested and supervised herds at the outbreak of war. When the Attested Herds Scheme was re-opened and a higher bonus for "T.T." milk was offered, there was a very quick response from the farming community. At the end of 1945, there were 20,036 attested herds, and at June 30th, 1946, there was 22,475. We have now reached a stage where a more progressive programme of eradication can be discussed with the veterinary and farming interests.

One of the most important factors of the work in tuberculosis eradication during the war has been the development of the comparative tuberculin test. It had long been a decision of the Ministry that it would eventually produce its own tuberculin, and when this decision came to be implemented, it was found, after investigating the tuberculins used all over the world, that the tuberculin most suitable for our purpose was the one produced by the Bureau of Animal Industry in America. Arrangements were made to commence production of tuberculin on a method closely following the American one, and this came to be known as Weybridge tuberculin. Weybridge tuberculin and the tuberculin then in general use were compared in the field. The current tuberculin failed to produce reactions in a number of infected animals which reacted to Weybridge tuberculin. After this trial Weybridge tuberculin was adopted in 1940, in the first place to test the herds of new applicants for Attestation; the percentage of reactors in those herds rose appreciably with the new tuberculin; but this was not altogether surprising in view of the experimental findings. When the tuberculin came to be used for all attested herds it quickly became evident that the number of reactors disclosed was not a true reflection of the position in the herds, for many herds which had been clear of infection for a number of years now showed a high incidence of reactors, a situation which is reflected in the percentage of reactors in attested herds in the second quarter of 1940 which was 2·28 per cent. against an average of just over 0·5 per cent. for the preceding eight quarters. Close investigation in the herds showing reactors revealed that many reactors were not affected with bovine type tuberculosis, and it was early shown that these animals had been sensitized to tuberculin by other types of organisms. To meet this situation, the comparative test was developed, and has been used since 1940 with only slight modification.

When one realizes that, even in countries where tuberculosis has virtually been eradicated by the use of the tuberculin test, there is a high percentage of reactors which are not infected with bovine type tuberculosis, one can appreciate that the comparative test may well provide considerably higher accuracy than can possibly be achieved by any one tuberculin. The test must be regarded as a herd test; it is of less value for the test of individual animals but it shares this disability with every other known tuberculin test. The interpretation of results depends to a large measure on the general picture of infection which is disclosed in the herd, and it has been found reasonable and safe to accept as negative, animals which give large reactions to mammalian tuberculin provided they also show a good response to avian tuberculin, and provided the results in the herd as a whole indicate that some form of non-specific infection is present. It is admitted that the test is cumbersome but several field trials have been carried out and it is hoped that the single intradermal comparative test may be adopted for use in official schemes.

The comparative test has been used throughout the period of greatest expansion in the numbers of attested herds and there is no evidence to indicate that it has failed in its purpose—to maintain herds free of infection. *Post-mortem* examinations have been carried out when opportunity offered and these have shown that errors in interpretation of the test may be made; the greater error has been made in removing animals as reactors which are not infected with bovine type tuberculosis, and in this connection, so-called skin tuberculosis has been responsible for sensitization to tuberculin in many of these cases. It is extremely difficult to present figures to indicate the results of *post-mortem* work as the animals slaughtered are usually selected because of the position maintaining in the herd and are not representative of all the animals tested.

Some indication of the accuracy of the test may be obtained from other figures; for instance, the average number of animals slaughtered each year in attested and T.T. herds under the Tuberculosis Order in the three years to March 31st, 1941, was 56; and in the year to March 31st, 1942, the first full year of comparative testing, the number slaughtered was 16, of which four were not affected at *post-mortem* examination.

Six attested herds have been slaughtered in recent years on account of foot-and-mouth disease, and in the 545 animals comprising these herds no lesions of tuberculosis were seen at *post-mortem* examination, although 88 of the animals had reacted to mammalian tuberculin at the last test of the herd but had been considered free of bovine tuberculosis in the light of the comparative test result.

The percentage of reactors disclosed in attested herds has been maintained well below 0·5 per cent. for the last four years in spite of the fact that several herds have been grossly re-infected during that time. It has been found possible to trace the origin of infection in practically all such cases and in many of them infection apparently reached the herd at the time of udder irrigation or uterine treatment.

| | 1943 | 1944 | 1945 | January 1st to June 30th, 1946 |
|---|---|---|---|---|
| No. of cases of primary tuberculosis of udder | 22 | 27 | 20 | 6 |
| Number of herds involved | 13 | ? | 14 | 5 |
| Percentage of cases in which there was a history of udder treatment | 90·9% | 89% | 95% | 100% |
| Number of cases of primary tuberculosis of uterus | 3 | 6 | | |
| Number of cases which had received uterine treatment | 3 | 6 | | |

During this period a large number of cases from untested herds have been recorded in which the *post-mortem* lesions suggest that the udder lesion was the primary one. In a number of these cases it has been possible also to establish that udder irrigation had been practised but enquiries regarding treatment have not been pursued to the same extent as in tested herds.

Besides tuberculosis there are many other diseases which are of importance, particularly in dairy herds. An endeavour was made to persuade the farming community that it would be to their advantage to approach disease problems in their herds on a different

basis from that which many of them customarily followed. They should approach the problem on a herd basis and seek a veterinary surgeon's advice and help, more by way of preventing disease than by way of treating it when it had become a serious problem. Inside this general propaganda the scheme fostered by the N.V.M.A. provided a method by which the farmer could obtain this advice and help at a recognized fee.

This Scheme for the Control of Certain Diseases of Dairy Cattle commenced in June, 1942, in England and Wales, and in October, 1942, in Scotland. Since the scheme has been in operation 7,920 herds in England and Wales and 389 in Scotland have participated and at June 30th, 1946, there were 6,012 herds in England and Wales and 159 in Scotland, comprising 252,455 cows and heifers still in the Scheme. The Scheme was introduced as a war-time measure for the conservation of the milk supply, but has been continued since then in view of its success in some parts of the country. It is evident that in addition to the owners taking full advantage of this Scheme, many are practising similar methods of control for at least one of the diseases it covers by private arrangement with their veterinary surgeons and many practitioners are providing a service closely following the general pattern of this Scheme although not officially under it.

The diseases covered by this Scheme are abortion, mastitis, infertility and Johne's disease.

### Contagious Abortion

At one time it was considered good practice to control this disease in a herd by the use of the agglutination test and the elimination of reactors, but it soon became evident that infection could be so easily introduced into a clean herd that some other method was preferable in the conditions prevailing in Great Britain. It was almost invariably found that when a clean herd became re-infected the disease spread rapidly within it and very heavy losses occurred. The vaccine known as the American Strain 19 Vaccine was therefore used experimentally and eventually recommended for use under the Control Scheme, and vaccination was adopted as the main policy of control of this disease in cattle. The Calf Vaccination Scheme was later introduced in December, 1944. Under this Scheme, heifers from four months of age up to the time of first bulling are vaccinated. All attested herds and all registered dairy herds are eligible. Vaccination is normally done at the time of a routine visit either for a tuberculin test or for inspection of the herd and this enables the work to be done at the low cost to the farmer of 1s. per head and provides a great saving in man-power. In the first year of its operation over 200,000 calves were vaccinated and 57,105 dairy herds were participating in the Scheme.

In the first six months of 1946 Strain 19 Vaccine has been issued from Weybridge:—

| | |
|---|---|
| For the Control Scheme ... ... | 89,268 doses. |
| For use privately ... ... ... | 77,858 doses. |
| For the Calf Vaccination Scheme ... | 193,815 doses. |
| | 360,941 doses. |

Since 1942, 50 vaccinated herds have been under close observation by members of the veterinary staff at Weybridge and in addition visits have been made to enquire into any complaints which have been received in connection with vaccination.

Complaints which have been investigated may be listed under certain headings.

1. *Abscess formation and persistent local reactions in* 25 *herds.*

These cases occurred in the earlier days of vaccination and improvements in technique have completely eliminated these conditions.

2. *Systemic disturbances and fall in milk yield in* 18 *herds.*

These certainly do occur; milk yield may fall as much as 80 lb. but the average loss is about 24 lb. spread over nine days.

3. *Deaths—eight animals.*

The cause of death was shown to be unrelated to the vaccine in every case.

4. *Infertility and sterility in vaccinated animals—in* 44 *herds.*

In no case could evidence be found to show that the vaccine was responsible. The cause varied from infertility in the bull to infection of the female genital tract and anoestrus which occurred equally among vaccinated and non-vaccinated animals.

5. *Abortions occurring in vaccinated animals—in* 144 *herds.*

Only in six herds was it shown that an insufficient degree of immunity had been produced by the vaccine. In other cases 76 animals were infected when vaccinated, in 33 an "abortion storm" was in progress when vaccination was done, in 29 abortion was due to causes other than contagious abortion such as trichomoniasis.

Experiments are in progress with other vaccines.

It may not be out of place to mention here the finding of an organism indistinguishable from *Brucella melitensis* in the milk of cows from dairy herds in England. In May, 1940, it was reported that a brucella, not the usual *Br. abortus*, had been found in a sample of milk under biological examination for tuberculosis. This sample came from a herd in Staffordshire. Enquiries were at once made and eventually an organism with the same characters was recovered from the milk of one cow in the herd. There was no history of any condition resembling undulant fever, either among the people on the farm or in the locality, nor was there any indication of the origin of this unusual infection. It was obviously necessary, however, to take active steps to reduce the risk of infection to man.

As a result, the Brucellosis Melitensis Order of 1940 was made in July, 1940. This Order provided powers to prevent the spread of infection and to slaughter infected animals in contact with infection. Under this Order infected, and in some cases contact, animals were slaughtered and disposed of by destruction of the unopened carcase so that there was no risk of infection to human beings; only the carcases of animals which were negative to an agglutination test were dressed for salvage.. In all cases the herd was quarantined until a full investigation was made.

A further outbreak was reported also in Staffordshire in October, 1941. In this case, twelve cows were suspected of excreting *Br. melitensis* in their milk. Three of them were sent to three different laboratories (Weybridge; Institute of Animal Pathology, Cambridge; and A.D.R.A., Moredun), and each reported that an organism which could not be distinguished from *Br. melitensis* had been recovered from the milk.

At this stage it was arranged for several laboratories to examine any brucellas found in the course of their routine work of examining bulk samples of milk for tuberculosis. Twenty counties in England and Wales were covered by this enquiry but only one further case came to light; this was in Nottinghamshire in 1942.

In the course of the investigation of these three outbreaks extensive examinations of blood and milk were made. In all cases *Br. abortus* infection was also present in the herd to some extent. The laboratories invariably reported similarly on the same samples and apparently the organism involved is one which cannot be differentiated from *Br. melitensis* by accepted laboratory methods. From three animals in two herds an organism was recorded as having certain characters of *Br. abortus* and certain characters of *Br. melitensis*—an intermediate organism. This finding suggests the possibility that the organism involved is one which behaves under laboratory test like *Br. melitensis* but has not all its features especially in regard to pathogenicity. In none of the cases was there any evidence of undulant fever among the people on the farms involved or in the districts consuming the milk.

### Mastitis

The methods of control recommended in the Control Scheme were not intended to eliminate the disease from the herd. They were primarily aimed at providing as much marketable milk as could possibly be obtained and there is little doubt that when the methods have been adopted much milk has been saved for consumption. Steady progress has been made in research work in the treatment of mastitis, and it may not be long before better recommendations can be made.

### Infertility

It had long been realized that sterility or infertility was responsible for heavy losses to the dairy farmer, but it was not until the early war years that any active steps were taken to introduce methods of treatment and control. It was essential that, in the first place, the veterinary profession should be alive to the benefits they could confer on the agricultural community by training themselves to diagnose pregnancy early and accurately, and to diagnose and treat the variety of conditions associated with infertility in cattle. The Ministry and the N.V.M.A. arranged for enthusiastic practitioners who had specialized in this work to make their services available to the general body of practitioners so that they might all be trained in this important work, and at a later stage the Ministry inaugurated its service of Sterility Advisory Officers who have been available since 1941 to assist practitioners in this work and who will next month be embodied in the Veterinary Investigation Officers' service which is being transferred to the Animal Health Division. The Sterility Advisory Officers have also played a big part in inaugurating and in some cases operating artificial insemination centres which have been set up in England and Wales. In one case a small insemination centre was operated purely as a measure to control an outbreak of trichomoniasis in a district where communal bulls were used, and it is interesting to record that artificial insemination was entirely successful in controlling the condition.

We have still a great deal to learn about infertility but there

is little doubt that a good start has been made and that attention to the health of the breeding animal promises to make a very substantial contribution to the increased production so urgently required in our dairy herds.

### Johne's Disease

The recommendations in the control scheme for Johne's disease are mainly concerned with the improvement of hygiene on the farm. More recently Doyle's work with a vaccine gives promise of value in badly infected herds and an extensive field trial of this vaccine has been launched.

## Sheep

It is only in the last 15 to 20 years that the veterinary profession has interested itself in the problem of sheep diseases and very important progress has been made in the time. It was appreciated, however, that while research work had given us the clue to many of the diseases in sheep, the farming community were far from realizing the benefits which were available to them.

Arising out of discussions with the Hill Sheep Farming Committee for England and Wales, the Ministry selected 19 Veterinary Inspectors to carry out a disease survey of hill sheep farms which commenced in the summer of 1942.

This work eventually embraced the main hill sheep farming areas in Great Britain and much useful information was obtained. Alongside this work the veterinary staff, co-operating with the V.I.O.s and in some instances with the help of the practitioner, carried out advisory work in connection with outbreaks of disease in hill flocks. Lectures and informal talks on sheep diseases were given in village halls to small groups of farmers who soon became very interested in the disease aspect of sheep farming. As a result of these efforts the Ministry has reason to believe that losses from certain diseases of sheep have substantially decreased in a number of areas, and the hill sheep farmer in many instances is now tackling his disease problem in a much more scientific manner than heretofore.

It may also be said that in certain parts of the country the veterinary practitioner is being drawn closer to the hill farmer than ever before, which in itself indicates progress. The Inspectors originally allotted to sheep work by the Ministry are not all available now but in many localities their work still continues and is highly appreciated by the sheep farmers.

## Poultry

Very little was done officially before the war in controlling diseases of poultry. Indeed, it may be said that the only service offered to the poultry farmers was a diagnosis service and, in addition, the testing of accredited flocks for pullorum disease. Blood samples were sent to Weybridge for test in the laboratory but it became increasingly difficult to obtain the samples at Weybridge in a condition fit for test as there were often serious delays when the parcels passed through London while the blitz was in progress. For this reason, but not until it had become evident from experimental work that the rapid test which is carried out by Veterinary Inspectors in the field was similar in accuracy to the tube test, the rapid test was introduced as the method of testing accredited flocks. It was also of some importance that leg banding of the birds was no longer necessary if this test was used and these leg bands were in very short supply. At this stage the work of blood testing was extended to flocks which were obtaining priority rations.

The Accredited Poultry Breeding Stations Scheme to-day contains approximately 5 per cent. of the poultry population of the country. While the figure is small, it is interesting to note that it embraces the majority of the breeding flocks, and includes most of the leading stocks in the industry. From the tables at top of column setting out the results of blood testing for bacillary white diarrhoea, the progress which the Scheme has made since 1939 will be seen.

England and Wales—Accredited Flocks

| Year | No. of flocks in scheme | No. of birds tested | No. of bloods tested | No. of bloods positive | Percentage reactors | Percentage flocks without reactor |
|---|---|---|---|---|---|---|
| 1939 | 227 | — | 237,274 | 596 | 0·19 | 72 |
| 1940 | 344 | — | 345,785 | 2,315 | 0·65 | 69 |
| 1941 | 409 | — | 301,435 | 2,005 | 0·71 | 70 |
| 1942 | 580 | 384,680 | 422,494 | 1,492 | 0·39 | 73 |
| 1943 | 1,101 | 696,833 | 765,264 | 2,678 | 0·38 | 75 |
| 1944 | 1,534 | 1,076,884 | 1,210,053 | 4,162 | 0·39 | 76 |
| 1945 | 1,812 | 1,339,853 | 1,526,430 | 5,258 | 0·39 | 78 |
| **England and Wales—Probationer Flocks** | | | | | | |
| 1939 | 263 | — | 278,627 | 3,325 | 1·19 | 51 |
| 1940 | 158 | — | 118,232 | 1,119 | 0·95 | 47 |
| 1941 | 627 | — | 369,912 | 6,706 | 1·81 | 51 |
| 1942 | 1,052 | 562,070 | 700,261 | 8,635 | 1·54 | 55 |
| 1943 | 1,035 | 500,953 | 617,250 | 7,420 | 1·48 | 56 |
| 1944 | 978 | 391,130 | 480,701 | 6,162 | 1·58 | 56 |
| 1945 | 1,220 | 564,142 | 745,202 | 8,837 | 1·57 | 56 |
| **Scotland—Accredited Flocks** | | | | | | |
| 1939 | 108 | — | 36,814 | 164 | 0·47 | 73 |
| 1940 | 102 | — | 34,396 | 204 | 0·59 | 76 |
| 1941 | 112 | — | 31,354 | 122 | 0·39 | 83 |
| 1942 | 135 | — | 39,464 | 157 | 0·4 | 75 |
| 1943 | 157 | — | 57,259 | 363 | 0·63 | 83 |
| 1944 | 226 | — | 113,645 | 637 | 0·6 | 72 |
| 1945 | 478 | — | 235,635 | 653 | 0·28 | 84 |
| **Scotland—Probationer Flocks** | | | | | | |
| 1939 | 23 | — | 4,067 | 284 | 4·61 | 48 |
| 1940 | 33 | — | 7,961 | 46 | 0·58 | 82 |
| 1941 | 44 | — | 17,492 | 249 | 1·42 | 64 |
| 1942 | 42 | — | 16,272 | 310 | 1·91 | 57 |
| 1943 | 131 | — | 37,273 | 538 | 1·44 | 60 |
| 1944 | 598 | — | 222,875 | 2,670 | 1·2 | 68 |
| 1945 | 396 | — | 115,119 | 1,168 | 0·75 | 67 |

There are in the Scheme to-day in England and Wales over 3,000 flocks and of these:—

885 have been free of B.W.D. reactors for three years.
604 have been free of B.W.D. reactors for four years.
371 have been free of B.W.D. reactors for five years.
75 have been free of B.W.D. reactors for six years.

The position in Scotland is 870 flocks in the Scheme and of these:—

330 have been free of B.W.D. reactors for three years.
219 have been free of B.W.D. reactors for four years.
149 have been free of B.W.D. reactors for five years.
28 have been free of B.W.D. reactors for six years.

The table at foot shows the outbreaks of disease discovered or reported in flocks accredited or on probation under the Scheme and dealt with by the Ministry's Veterinary staff.

"Salmonellosis" or "Salmonella infection" is the term applied to diseases of poultry caused by salmonella organisms, irrespective of the type involved other than B.W.D. and fowl typhoid. Until 1943, the only salmonella organisms found in poultry in this country were *S. pullorum*, *S. gallinarum*, *S. aertrycke* (or *S. typhimurium*) and *S. enteritidis* (*Gaertner bacillus*). To-day, there are twelve types known.

Coccidiosis is still a major problem on poultry rearing farms, and while it may be assumed that practically every outbreak of B.W.D. and salmonellosis in chicks on premises within the A.P.B.S. Scheme is brought to the notice of the Ministry, comparatively few outbreaks of coccidiosis and blackhead come to the notice of the Animal Health Division. Sulphamezathine treatment has proved efficacious in controlling outbreaks of coccidiosis, and while arsenical preparations in some instances have proved successful in the treatment of blackhead in turkeys we have yet to find the complete answer to this disease.

Since the introduction of the Poultry and Hatching Eggs (Importation) Order outbreaks of the acute form of fowl cholera have

| | England | | | | | | | Scotland | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1939 | 1940 | 1941 | 1942 | 1943 | 1944 | 1945 | 1939 | 1940 | 1941 | 1942 | 1943 | 1944 | 1945 |
| B.W.D. in chicks | 5 | 13 | 6 | 28 | 63 | 94 | 49 | 2 | 1 | — | — | 2 | 11 | 8 |
| Salmonellosis | — | 1 | 3 | 4 | 13 | 36 | 16 | — | — | — | — | — | 6 | 2 |
| Tuberculosis | 39 | 11 | 12 | 16 | 18 | 17 | 23 | 9 | 3 | 3 | 1 | 1 | 15 | 20 |
| Infectious laryngotracheitis | 1 | — | 1 | 13 | 1 | — | 1 | — | — | — | — | — | — | — |
| Fowl cholera | 2 | — | 1 | 1 | 2 | — | 5 | — | — | — | — | — | — | — |
| Fowl typhoid | — | — | 5 | 3 | 1 | 1 | 5 | 1 | — | — | — | — | 1 | — |
| Fowl pox | — | 2 | 1 | 3 | 4 | 6 | 4 | — | — | — | — | 1 | — | 1 |
| Coccidiosis | — | — | — | 16 | 28 | 34 | 8 | — | — | — | 1 | — | — | — |
| Blackhead | — | — | 2 | 7 | 3 | 3 | 8 | — | — | — | — | — | 2 | 4 |

become practically unknown in this country. The outbreaks shown in the table refer almost entirely to cases of the chronic form of the disease. With the rapid expansion of air transport greater care than ever will require to be exercised to prevent the introduction of disease; especially is this the case with regard to fowl pest, which is reported to have spread to Germany and the U.S.A.

Fowl paralysis and contagious catarrh still take a heavy toll but apart from advising on the adoption of hygienic measures, we can give owners little advice on the controlling of these diseases.

The figures of disease outbreaks refer solely to flocks within the A.P.B.S. Scheme and we have not at present any means of assessing with any degree of accuracy the disease position throughout the poultry industry.

Space does not allow of more than passing reference to the fact that the Ministry's Veterinary staff has assisted War Agricultural Executive Committees throughout the country with their problems of culling both in dairy herds and poultry flocks, or to the seconding of senior staff to the Ministry of Food as Technical Advisers in connection with meat inspection, or to the part the field staff has played in the field trials in connection with Doyle's successful researches with crystal vaccine for swine fever, iodocasein feeding experiments and trials of various tuberculins, etc. Routine work has been maintained and the only important alteration is in the frequency of dairy herd inspections. All dairy herds are now inspected at least once each year.

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(*B*) *by*

H. W. STEELE-BODGER, M.R.C.V.S.

TAMWORTH

I must, in the first instance, congratulate Mr. Ritchie, and express my admiration for the way in which he has converted an 'annual' report covering the war-time years into a most interesting story portraying, as I think it does, the Ministry of Agriculture as a machine, well oiled—using the word 'oiled' in the nice sense—and smooth running, a veritable robot; collecting data, devising and turning out schemes for the prevention and control of disease, and getting them put into operation.

Compared with this hive of industry I fear the story that I have to tell of the National Veterinary Medical Association and the veterinary practitioner will sound very small beer; in fact, one is given to wondering if the National Veterinary Medical Association had really been as full of initiative and enterprise as had been supposed, or had we, in fact, only been basking in the reflected glory of the Ministry?

My story is not spectacular, nothing ran smoothly, and anything gained was secured only after a hard fight and dogged determination.

If, in speaking of the achievements of the veterinary profession during the war, I appear to stress unduly the part played by practitioners I intend no offence and cast no reflection upon the part played by members of the Animal Health Division; please understand that. They did as they were told, and many, I know, would have preferred to have joined the R.A.V.C. or other of the services, or to have engaged in the more strenuous life of veterinary practice had they been permitted to do so. But the fact remains that it was widely felt within the profession—and this feeling was shared by very many members of the Ministry's whole-time staff—that they did not contribute their fair share to the sacrifices and hardships which the profession was called upon to endure.

May I deal first, therefore, with the practitioners, hard-working and painstaking, who at the best never received the appreciation that was their due, and many of whom, during the years of peace and agricultural depression, had found it hard to get a living in country practice. These men, many of them middle-aged and beyond, found themselves in the van of the battle on the home front. As the war proceeded, the amount of work increased at least twofold and in many cases more. Recruitment into the Services claimed several hundred young men who normally would have assisted or replaced the older practitioners. Responsibilities also increased; a farmer no longer spun a coin to decide whether a cow suffering from mastitis, abortion or infertility should be fed out or treated; whether, in the case of the animal suffering from pneumonia, he should send for the knacker or the veterinary surgeon. The veterinary practitioner was called in earlier, he was called in more frequently and he was expected to restore his patient to health and productivity. Most practitioners organized or served in the animal A.R.P. service, Home Guard or Civil Defence, whilst many, already grossly overworked, loyally agreed to engage in the Survey Scheme.

Unfortunately the difficulties of running a practice also increased and life became more complex. In addition to the increasing shortage of professional and lay staff, drugs became more difficult to obtain, cars wore out and could not be replaced, whilst car repairs were infinitely more expensive and much less reliable. Tyres became almost impossible to acquire and, when obtained, were often not much better than scrap. Add to these difficulties the discomfort of motoring in the black-out, night after night, often during an air raid, peering hopefully or fearfully along a road or cart track which normally one knew like the back of one's hand, but which in the black-out was unrecognizable. I know I often prayed for that little bit of mist which I could imagine was a fog and therefore enable me to use my fog lamp with a clear—or semi-clear—conscience. Envisage all this and more, and you have a picture of the difficulties which encompassed the average veterinary practitioner in war-time.

Yet the situation was not without its humorous side. Two personal experiences will serve as examples. During a night of the blitz on Coventry I was called to a calving case in the direction of that city. The heifer had been placed in an old corrugated iron shed in the middle of a field. I bashed a wing and lost a running-board against a tree stump on my way across. The explosion of every bomb and the gun fire rattled the roof, and it appeared as though the walls resembled the respirations of a broken winded horse. To this day I am in doubt as to whether the heifer calved as the result of our combined exertions or from fright—again mutual! On the way back across the field, I lost my direction, and was only prevented from driving into a deep pit by the farmer who, seeing the direction which I had taken, ran after me shouting and waving his hurricane lamp. The climax came when a warden and a policeman turned up and played hell because an unshielded light had been exposed! I narrowly escaped being prosecuted—for assault!

The second example, if you will bear with me, concerns an experience in Somerset whilst I was giving refresher tuition. I was trying to find my way back to Taunton from a place about ten miles distant. I repeatedly stopped and asked my way from pedestrians, several of whom offered at different times to accompany me part of the way. I got to Taunton about two hours later having covered about 30 miles. When I described my journey to John Fox, I realized that I had in fact been 'taken for a ride' round the country for the benefit of my various passengers!—I got little sympathy from my host!

Much of the Association's activity, particularly in the early part of the war, was bound up with N.A.R.P.A.C.—National Air Raids Precautions for Animals Committee—and about 80 per cent. of the profession was at one time or another assisting in the work of this organization. Our General Secretary—Mr. Knight—was appointed Secretary to the Committee, and Mr. Bywater became its Hon. Treasurer. Col. R. J. Stordy was Chief Executive Officer and Dr. Wooldridge was his deputy. I, also, at times, held various positions. The Association's offices became the headquarters of the Committee and an augmented office staff rendered yeoman service. I do not know how many were employed there at that time as they came and went, some of them I probably never saw. I remember, however, hearing a story against myself. During one of my frequent trips to Gordon Square, I had occasion to go in and out of the general office a good many times during a short space of time. Finally, one of the girls asked who I was; on being informed—in awed tones, no doubt—that I was the President, the girl thought a moment and then said "Isn't he like a draught"!

I am sure that my colleagues who were associated with me will agree when I say that we had many headaches—and heartaches—and most of these were due to the squabbles of the animal welfare societies. Individually these societies worked well, but collectively they could not agree on the Committee and it is one of my chief regrets that we failed to secure unanimity amongst them; this failure was not due to any lack of trying on the part of members of the veterinary profession.

During its existence, N.A.R.P.A.C. changed its constitution several times. At first it was divided for convenience into 'Urban' and 'Rural' areas, both under the control of the main Committee. Latterly, however, when a Government grant was made available, it was divided into a Technical Branch and a Registration Branch which incorporated an accident insurance scheme. A 'Farm Livestock Emergency Service' was established separately to cover rural areas, this latter being established by the Government.

No chronicle of the profession's work in connection with N.A.R.P.A.C. would be adequate without paying special tribute to the part played by Col. R. J. Stordy No longer a young man, he threw himself into the work of the Committee with the zeal and enthusiasm of a man many years his junior, and set a fine example to all by his courage. During the whole period of the blitz London remained his headquarters, and, though twice bombed

out of his club and hotel, he never wavered. There is no doubt, however, that the strain of the severe bombing by night and the Committee squabbles by day, undermined his health. Stordy was a grand fellow, and he kept the honour of the profession high in his dealings with the Government departments and other bodies and individuals with whom he came into contact. We saw a great deal of each other in those days; Stordy's unbounded good humour and his unequalled ability as a raconteur—and his stories were as fascinating and varied as they were unlimited—made him excellent company. I look back with gratitude and pleasure upon a friendship which was very dear but all too short.

As is well known, Dr. Wooldridge succeeded Col. Stordy and he deserves great praise, not only for the work he did, but for the patience which he exercised, and for tolerating so long a situation which had become quite impossible for Bywater and myself.

I must pay special tribute to my colleagues who lived in the blitzed areas; many members had built up a highly efficient N.A.R.P.A.C. organization; I can name only a very few with whom I came into close contact—Bywater at West Ham, Cormack at Coventry, Dawes at West Bromwich, and Gould at Southampton, but there were, of course, many others. I witnessed the strain that the air raids and responsibilities imposed upon them. I well remember at a meeting at Winchester, I was having lunch with a number of practitioners; one looking hale and hearty, who came from a comparatively safe area in the West Country, was comparing and contrasting the morale of the British and German people under air bombardment. "We can take it indefinitely," he said proudly, "but they can't." "Can we," bitterly replied a practitioner from a south coast town, "let those who can take it indefinitely come and take my place. I have hardly had my clothes off for a fortnight, and have only snatched a few minutes' sleep at a time, sitting on my bed." Looking from the hearty, fresh complexioned, well nourished figure of the one, to the desperately tired, sallow complexioned, sunken-eyed figure of the other, one realized how easy, but how unfair and dangerous it is to moralize or generalize, at a distance.

After the blitz started on London, you will recollect that Mr. Knight's own house was demolished, he and his family having a miraculous escape. We therefore evacuated the Association's offices and staff to my Lichfield house. *The Veterinary Record* was ostensibly to be run from Mr. Brown's house at Welwyn Garden City, but, in point of fact, Mr. Brown continued to attend at 36, Gordon Square every day except when it was roped off as a 'danger area.' One morning when I arrived early in London I found the whole of Gordon Square 'out of bounds'; Mr. Brown was walking up and down like a caged beast on the edge of the boundary very annoyed that the police would not let him through. We managed to get temporary accommodation in the British Medical Association building. I should like to pay tribute to Will Brown for his loyalty and devotion to duty; he set a fine example, all the more commendable in one holding the views which he does as a Quaker.

I don't think it is generally known how nearly the Association's offices were destroyed. On one occasion, two incendiaries came through the roof into the architect's rooms on the top floor; one bomb failed to ignite and lay beside a heap of plans; another burned through the floor boards and was extinguished as it lay beside a half-inch gas pipe.

I should like here to pay a tribute to another group of veterinary surgeons who served the practitioners well during the whole war, and yet received little official thanks for what was often a very onerous though entirely honorary task. I refer to the petroleum liaison officers; as a whole they did a very good job of work. I believe I am right in saying that no section of the community was better treated in respect of petrol supplies than was the veterinary profession, so that in thanking our own liaison officers, I should also like to thank the Divisional Petroleum Officers and their staffs. When petrol rationing was threatened I went, in company with John Holroyd, the then President of the R.C.V.S., to interview the Deputy Chief Petroleum Officer at St. Annes. When he had greeted us he said somewhat wearily, "Well, I suppose you have come to tell me the same tale as the rest—you want the same amount of petrol!" "No, Sir," I replied, "I have not." "That's a pleasant change," he said, brightening, but when I explained that I had come to ask for 50 per cent. more than our pre-war consumption, he was incredulous. Nevertheless I think his surprise caused him to listen with greater interest to our application, and, thanks to a supporting letter from the Animal Health Division of the Ministry of Agriculture, we got a very straight deal.

It was shortly after the outbreak of war that, as President of the Association, I was summoned to a meeting to hear the plans of the Army Council regarding the numbers of the veterinary profession who were likely to be required for the R.A.V.C. At this meeting we were informed that so far as the situation could be envisaged, very few veterinary officers would be needed, and many members who had offered their services had been turned down. Certainly at that time one could not have foreseen that later on we should be going through the register of veterinary surgeons with a toothcomb in order to satisfy the demands of the R.A.V.C.

Many at that time felt that the part which the veterinary profession would be called upon to play during the war would be an insignificant one, and when the Ministry of Agriculture announced the curtailment of the Attested Herds Scheme and the suspension of the Licensing of Bulls Act, one wondered if the powers that be had any vision.

These restrictive actions of the Ministry were vigorously opposed by the Association on a number of occasions. In connection with the Attested Herds Scheme we were informed that tuberculosis, being a long-term problem, its further control could not be considered during the war. It is clear now that it would have been wiser to have extended the Attested Herds Scheme particularly in those areas in which there was the greatest number of Attested Herds and where the incidence of tuberculosis was lowest. If this had been done we should have been better placed than we are to-day to deal with this disease. In respect of the Licensing of Bulls Act, I remember at the end of a long discussion at Soho Square, a high official clinched the argument by saying, "Well, anyway, what's the use of putting a well bred bull on a cross bred cow?" One could not of course persist further in the face of such opinions.

I must here and now state that in my opinion the Ministry of Agriculture missed a valuable opportunity during the war of pushing ahead with schemes of disease control. The war afforded to the Government of this country an excuse and an opportunity for introducing legislation which in times of peace would have aroused considerable opposition, and I think in the interests of food production the Ministry could have got away with anything short of murder, yet very little was done, and this Association in its early endeavours got no encouragement and precious little help.

One would have thought, for instance, that whilst the pig population was at such a low level a serious attempt would have been made to eradicate swine fever, even if that had entailed importing crystal violet vaccine from the States as part of the Lease-Lend operations as was I believe in fact done with strain 19 anti-abortion vaccine.

In 1941, the N.F.U. and the N.V.M.A. urged the Ministry to take such steps in connection with the former disease. In the same year this Association recommended a 'Scheme of Calfhood Vaccination,' yet only recently have adequate supplies of vaccine become available for use under the present Scheme which was imposed upon the profession by the Ministry at the expense of the veterinary practitioner, as has been tacitly admitted by Mr. Ritchie in his paper! Mr. Ritchie says, "Vaccination is normally done at the time of a routine visit, either for a tuberculin test, or for the inspection of the herd, and this enables the work to be done at a low cost to the farmer of 1s. per head and provides a great saving in man-power." I would observe that very many vaccinations recorded as being performed at the time of the herd inspections are, in fact, done at another time mutually convenient to the farmer and the practitioner, and I see no justification for foisting this Scheme on the profession to be carried out at the time of the herd inspection—the *most* impracticable time—merely in order to enable the work to be done at the low cost to the farmer of 1s. per head. Farmers are well able to afford a reasonable fee for the benefits of vaccination against abortion and I doubt very much if the number of calves injected under this Scheme would have been materially less if the fee had been 2s. 6d. a head instead of 1s.

*En passant*, I should like to remind members that in spite of what I have said, the 1s. fee paid by the Ministry to the practitioner represents a great achievement on the part of the Association. The Ministry's first offer was 6d. a head, therefore an increase of 100 per cent. must be considered 'lovely grub' as opposed to 'chicken feed'! Who knows, perhaps the present reluctance of the Ministry to accede to the Association's demands on behalf of our whole-time colleagues is due to Treasury reprimand at their previous lavishness!

As much of the work which the N.V.M.A. accomplished during the war is bound up with the Survey Committee, it is only right that I should place on record its origin and some description of its labours. For better or for worse, it all arose from a meeting between Tom Dalling and myself in the Cumberland Hotel one night early in 1940. We were discussing the necessity for an increased milk supply and the limiting effect which cattle diseases had upon its output. When I say "we were discussing," it would, of course, be truer to say that Tom Dalling was expounding and

I was listening. At any rate, the result of the discussion was that he agreed to read a paper on the subject before the Society of Veterinary Practitioners. At this meeting a resolution was passed calling upon the Council of the N.V.M.A. to appoint a Committee "To consider ways and means whereby the veterinary profession can be used to the greatest advantage in the control of health and disease in domestic animals throughout the country." On April 9th, 1940, the Council approved the resolution and referred the selection of the Committee to the Finance and General Purposes Committee.

The first meeting of the Survey Committee took place on May 10th, 1940. Tom Dalling was appointed Hon. Secretary and I became its Chairman.

It may be said, therefore, that Dalling and Steele-Bodger were the parents of the Survey Committee, though it might be a matter for delicate debate which was the male, and which the female, parent. I would suggest, however, that as I have had to 'hold the baby' ever since, I had better be 'the mother.' [In view of Tom's recent neglect of both 'mother' and offspring I think it is my duty to bring an action against him for desertion !]

As I have said, the first meeting took place on May 10th, 1940; subsequently an Executive Committee was formed and numerous meetings followed, at first in London; these meetings, which would commence during the day at 36, Gordon Square, were often continued at the Cumberland Hotel late into the night; in those days it was easier to get rooms there and we used to have a sitting room. When London got too hot for us, we held our meetings at Tamworth, frequently at week-ends. We were concerned in gathering evidence from sources both within and without the profession, on the incidence of diseases of dairy cattle and in estimating the losses which resulted from these diseases. Having obtained our evidence we proceeded to draw up our first report and to make recommendations for the control of the diseases surveyed.

I venture to believe that those who worked in close association with me at that time will never forget those days. I well remember our last session on that first report; it lasted two days, and for the greater part of three nights, finally being completed at 6 a.m. on the third day. We revived ourselves with relays of black coffee and glucose, and I am sure that even now Dalling is sometimes haunted at nights by a shout of "Wake up, Tom !"

Members of the profession owe, and ever will owe, a debt of gratitude to the Survey Committee and particularly to Dalling, Gould, Hancock, Hignett, McEwen, Matthews, Miller, Montgomerie, Stableforth, and Wooldridge—to some, perhaps, in greater measure than to others—for their work at that time. I hope that although they were referred to disparagingly as the "Tamworth Dragoons" they will feel that the effort they made and the energy they expended then has proved to have been well worth while. Surely every member of the veterinary profession and every livestock owner has benefitted, or could have benefitted, by the endeavours of the Survey Committee, and to one and all, past and present members, I am grateful not only for their labours but for their loyalty and forbearance.

I will not weary you by recapitulating our findings and recommendations—it will suffice to remind you that as a result of mastitis, abortion, infertility and Johne's disease, the country lost two hundred million gallons (200,000,000) of milk annually, and we made certain recommendations in consequence. This estimate has never been challenged, though the Ministry of Agriculture has conveniently lost the last nought and always refers to the loss as twenty million gallons (20,000,000) without adducing any evidence in support of this figure—still what is one nought amongst friends !

Having decided that something must be done we went to the Ministry and we were very discouraged as a result of our visit. We were informed that any recommendations which we made must show results in a 'short time' and when we pressed for a definition of this, we were told—three months. That shook us rather because our recommendations were concerned with contagious abortion control and we had to inform the 'high-ups' that as the normal gestation period of a female bovine was nine months we could not reduce it to three, even at the behest of the Ministry of Agriculture. We went on with our plans, however, and we contacted the National Farmers' Union and formed a Joint Committee with them; we also formed a Joint Committee with the R.C.V.S. so that they could lend additional weight to our representations. We then approached the Milk Marketing Board, the Agricultural Research Council and the Breed Societies, and secured their interest. Finally we came back to the Ministry of Agriculture with this additional pressure and meetings were held at the offices of the Agricultural Research Council to discuss our technical recommendations. The Ministry of Health, the Ministry of Agriculture, the Medical Research Council, the Agricultural Research Council, the National Veterinary Medical Association were represented, and technical measures were ultimately agreed. I would like to mention the support which we received from two individuals in particular—Sir Joseph Barcroft and the late Dr. Topley. They were on our side 100 per cent., and having agreed the measures we were recommending, the situation was summed up by Sir Joseph Barcroft in words to this effect—"In times of war one must take risks. If you are satisfied that the risks are worth taking you should take them with both hands and go ahead; do not be diffident, battles are never won by half-hearted measures." And so we went ahead.

Ultimately the Control Scheme was agreed after numerous meetings with the National Farmers' Union and with the Ministry.

I should like to emphasize that the control scheme never envisaged the eradication of disease. It was an attempt to increase the amount of *marketable* milk by control of the diseases chiefly responsible for the loss of milk. In assessing the degree of success or failure of the scheme this important fact should be remembered.

May I digress for a few moments to say that the recommendations which we made then are now being revised in the light of experience. Recent advances in therapeutics—notably penicillin—and the increasing incidence of 'physiological' infertility and of trichomoniasis have also rendered this course necessary.

May I suggest to Mr. Ritchie the urgent need for the Ministry to take active steps with regard to this latter disease. Some legislation for the control of trichomoniasis, particularly in respect of the bull, is overdue. The manner in which bulls known to be, or suspected of being, infected with this disease are being sold in the pedigree and commercial markets is nothing less than a scandal.

I would also wish to support Mr. Ritchie in calling attention to the danger of transmitting infection by the careless application of the control measures recommended. The necessity for the complete sterilization by boiling of all instruments used in connection with udder or uterine injection, cannot be too strongly urged. Any member of the profession who fails to observe this elementary precaution is asking for trouble, and his neglect may well bring discredit, not only upon himself, but upon his more careful colleagues.

To continue, Mr. Chairman, my disjointed narrative. It was felt that there was a need for refresher tuition in pregnancy diagnosis and the treatment for infertility—and I was interested to note the very delicate way in which Mr. Ritchie skimmed over this subject. He did not, I think, pay as much tribute as he should have done to the initiative which was taken by this Association in promoting that scheme. He has implied that a lot of this work was done by the Sterility Officers. I do not wish to underrate their contribution, on the contrary, but I would remind him how many, or rather how few, of these officers there were in 1941, and this was not their especial job. I will say quite frankly that if it had been left to the Ministry we should not have had any refresher tuition in the sense in which it has been done. The Minister of Agriculture's suggestion was that about 20 cows at Weybridge should be used for this purpose, and that these would suffice for all practitioners ! When we protested at the fate of these poor animals, neither we, nor the cows, got much sympathy. However, ultimately it was arranged that the scheme which we proposed should be sponsored by the Professor of Agriculture at Cambridge through Professor Dalling.

I would like to take this opportunity of thanking Dalling for all he did, and those practitioners—Noel Bowen, James Brown, 'Winkie' Dwerryhouse Norman Gold, George Gould, Sidney Jennings, R. D. McIntosh, and James McWilliam—who gave their time so willingly and assisted in giving refresher tuition to their professional brethren. To this list must be added the name of Sammy Hignett—my indefatigable henchman—to whom I have never appealed in vain. They did a very good job of work and I think I am justified in saying that that scheme, which was initiated and operated by the N.V.M.A. with some financial assistance from the R.C.V.S. was probably of greater value to practitioners than any other measure devised by the N.V.M.A. I can assure those of my colleagues who assisted me in this work that their efforts were; and still are, very much appreciated by all who took advantage of their tuition. Speaking for myself, I can say with truth that I had some very happy times even though most of my waking hours were spent at the tail-end of a cow. It has been suggested that when my grandchildren ask "What did Grandpa do in the Great War ?" my sons will reply, "He stood with his left arm in a cow's rectum !"

I should also like to say a personal 'thank you' to those members of the Ministry's whole-time staff who gave me valuable assistance in organizing these tours and in making arrangements with the local practitioners. Particularly would I mention A. D. J. Brennan, John Fox, A. B. Kerr, and H. T. Matthews who, with numerous D.I.s and V.I.s helped so much. Without their co-operation the scheme would not have been nearly so easy to

operate and would not have been so successful. Not only did they in many instances circularize the practitioners, but they went out of their way to encourage them to take advantage of the scheme and I am sure they themselves enjoyed taking part in some of the clinical work which we did.

Nor must I omit to place on record my indebtedness to my old friend Andrew Spreull who, with his accustomed energy, circularized the practitioners in the north-east of Scotland and successfully organized demonstrations at the Dundee abattoir.

The outlook of some of the farmers in connection with pregnancy diagnosis was amusing, and in Wales some of them were apprehensive. It was not generally recognized at that time the numbers of pregnant animals which continue to accept service. I remember one small herd in which four out of 16 animals which had been served in the last three weeks were found to be at least three months in calf. The farmer who had been at first rather diffident, in fact almost reluctant, to permit the examination, was duly impressed and was rather ashamed on behalf of his 'loose' female bovines. In the end we were invited in and had the usual spread which is always provided by Welsh farmers to people who visit them. The farmer drew me aside and enquired anxiously if I would advise getting rid of his 'wanton' females lest the condition should be catching!

One other anecdote I can't resist. It concerns a big herd at an agricultural institute in the West Country. Examinations had revealed a large number of animals to be pregnant which the cowman maintained had never been served, and the dairy instructress who was doing the recording for me referred to these as having been served by the 'phantom bull.' When we had finished the examinations this humorous dame—alas, since deceased—said to the Principal of the Institute, "You know Mr. H—— this has all been most illuminating, and as we are starting a training school for land girls here on Monday, what about getting Mr. Steele-Bodger to stay the week-end to give them the once-over?" No, Mr. Chairman, I did not stay!

The N.V.M.A. took a prominent part in connection with demonstrations for the War Agricultural Executive Committees. In conjunction with these Committees, demonstrations were organized up and down the country and many of my colleagues abased themselves and went tub-thumping in markets and other places to preach the gospel of preventive medicine and disease control, and to 'sell' the Control Scheme. At first I loathed it, but I learned the technique from Bill Ironside—anyone who knows his sense of humour will realize how rapidly he could put his audience at ease.

The first of these demonstrations took place in Cheshire and was participated in by Dr. Mingle who came from America to supervise the production of 'strain 19' anti-abortion vaccine. I think one might now make public the fact that both Dr. Mingle and much of the laboratory apparatus came over by bomber as priority No. 1 in order to expedite the production of vaccine at Weybridge. The Cheshire demonstration was a very successful one and it was followed by many others all over the country.

So far as I was concerned, the end came when the Ministry of Agriculture asked me if I couldn't travel by train to these demonstrations and so save petrol. As I always endeavoured whenever possible to do the return journey in the day, and as I was invariably accompanied by a dustbin full of bovine uteri and other bovine organs, and appendages, I decided to call it a day.

Following upon the Report on Some Diseases of Dairy Cattle, the Survey Committee got busy with other subjects and in due course a Report on Sheep Diseases appeared—the greatest credit for this and for much besides is due to the Chairman of the Sub-committee, A. D. McEwen. This was followed by a booklet on Artificial Insemination, for which Gould, Hignett and Scorgie were largely responsible. A Report on Parasitic Diseases of Bovines then appeared the main burden of which was borne by E. L. Taylor who has been indefatigable in his efforts to assist the Committee. The Memorandum on Hill Sheep Farming in England and Wales, prepared by the Survey Committee on behalf of the Association at the request of the Governmental Committee on Hill Sheep Farming in England and Wales, was well received—Miller, Roberts and Taylor deserve special thanks for this. At the same time the Scottish Branch submitted a report to the Governmental Committee on Hill Sheep Farming in Scotland. Both the Survey Committee and the Scottish Branch have prepared recommendations concerning Hill Sheep Farming and an agreed scheme is in course of preparation.

The Report on Calf Husbandry and Calf Diseases is before you this week; it has taken a long time to prepare but thanks to the patience and perseverance of Bruford, the Chairman of the Sub-committee, it is at last completed.

The Report on Pig Husbandry and Pig Diseases is still awaiting certain sections for which Stableforth has now assumed responsibility. This report was one of the first to be started and it is no fault of its Chairman—P. L. Shanks—that it has not yet been published; he has done his best and I am sure it will be of value when it eventually appears.

A Report on Laboratory Aids to Clinical Diagnosis is in course of preparation under the capable Chairmanship of R. S. Roberts. It may yet be some time before this is ready for publication but many experts are contributing to it and I have no doubt that when it is published it will be of the greatest value, particularly to practitioners and undergraduates.

A sub-committee under A. W. Stableforth is compiling a report on the Collection of Accurate Data but I must confess to being a little diffident about this now, for, having listened to Mr. Ritchie, it would appear that the Ministry has got all that taped. Nevertheless, it is statistical data which we want and I hope that the Ministry will shortly invite the Association to participate in a discussion as to ways and means of obtaining this.

I wish you would bear with me while I read you an extract of something which was written in 1870 relating to the importance of the collection of data. For drawing my attention to this, I am indebted—as I am for many other things—to H. T. Matthews. It is on the measurement of morbidity: "The thing to aim at ultimately is a Return of the cases of sickness in the civil population as complete as is now procured from the army in England. It will be an invaluable contribution to therapeutics as well as to hygiene; for it will enable the therapeutist to determine the *duration* and the *fatality* of all forms of disease under the several existing systems of treatment in the various sanitary and social conditions of the people. Illusions will be dispelled; quackery as completely as astrology suppressed; a science of therapeutics created; suffering diminished; life shielded from many dangers. The national returns of cases, and of causes of death will be an arsenal which the genius of English Healers cannot fail to turn to account." I wonder when that was written 70 years ago if the writer could have imagined that we would still be suggesting in somewhat halting and apologetic language the necessity for it and pleading that a beginning should at last be made to achieve this aim. I think it is safe to say that if it is pressed we shall be a lot better off and in a much better position to assess not only the need for control measures, but the value which these control measures have had and are likely to have.

In addition to those for which the Survey Committee has been responsible other valuable reports have been prepared by the Association. The Veterinary Officers and Public Health Committee, under the Chairmanship of J. R. Barker, has produced a number of memoranda, one on Meat and Milk, and one on the Eradication of Tuberculosis, for both of which chief credit, I believe, must go to Miller, Ritchie and Wooldridge.

This Committee was also responsible for a Memorandum on Farm Buildings which was prepared at the request of a departmental committee. This report also received very favourable comment. My industrious and indefatigable friend William Miller was, with me, largely concerned in its preparation and for my part I should like to express my indebtedness to Frank Davidson and George Sangster for their very valuable help. It is to be hoped that the unrivalled knowledge of these two pioneers and that of others of their colleagues will be made use of by the Ministry in implementing the new legislation on milk production.

The Scottish Branch also produced a Memorandum on Farm Buildings based upon that prepared by the parent body.

Mention must be made of the Memorandum on Water Supplies and Sewage Disposal, prepared by a sub-committee of which I was a member. Although little has come of it, much time was spent in its preparation.

The Organizing Committee under the Chairmanship of T. L. Wright, is just completing a handbook on First Aid for Animals which will, I feel sure, redound to the credit of the Association.

From the above chronicle it will be seen that the Association and its members have not been idle. Particular mention has been made of some members, but there were of course many others, some of whom doubtless are equally deserving of mention—I am sure they will forgive me for omitting them.

There are but two other matters to which I must refer. In 1943 Dr. Wooldridge founded the Veterinary Educational Trust. This has achieved much greater success than I or any of his friends thought it would; perhaps it has exceeded his expectations. It must, I think, be considered as one of the achievements of the veterinary profession in war-time.

Lastly I must mention the sums which the N.V.M.A. raised for benevolence: not only did the Association vote £1,000 for the assistance of veterinary surgeons who were badly blitzed but as a result of an appeal by the officers of the Association over £800 was raised and, for a small profession, I think that is a very creditable achievement.

Before I conclude, I should like to say this: if the Association has failed, or partially failed, in its efforts, I, as President, and

as Vice-President, must, and do, accept my share of responsibility in that it was due to failure on my part to secure the loyalty of all members of the Association and the profession. Certain it is that few presidents have been more criticized than was I; that does not matter in the least, but I am intensely grateful, and members of the Association must be immensely grateful, to my colleagues who did so much splendid work. I take this opportunity of thanking you all for your response to the appeals which I made to you; particularly those practitioners already over-worked, who were content to do more. Now, as then, it is essential that we stand together. If we do that nothing can harm us. May I remind you of the words—as appropriate to-day as they were then—with which I concluded my Presidential New Year Message in 1939

"Grant us so rich a faith, so high a courage,
that we may not fail."

. . . . .

## DISCUSSION

**Mr. A. McLean** (Belfast), who was the first of the openers of the discussion, said: I first wish to thank the Committee for their kindness in asking me to open the discussion on Mr. Ritchie's paper. At the same time, I regret that such an honour should be at the expense of my friend, Major Brennan DeVine, who is laid aside through illness. He could and would have done more justice to this paper than I can possibly hope to do. Major DeVine has on many previous occasions taken an active part in the proceedings of this Association, and I am sure I am expressing the wish of everyone in this room when I say that I hope he will soon be restored to health, and that he may be spared many years to enjoy what we all agree is a well-earned retirement.

I would also like to congratulate the essayist on his paper. Mr. Ritchie has given us an excellent review of the many activities of the veterinary profession during the war period, and in doing so has placed before us many recent achievements which must have an important bearing on our future usefulness.

The task which devolves upon me is an extremely light and pleasant one—pleasant on account of the absence of adverse criticism—light, in so much as the facts known regarding the subject have been presented in such a masterly fashion that very little can be added, and apart from reviewing briefly the activities of the profession in Northern Ireland, my greatest difficulty is to avoid paraphrasing what the essayist has already said.

Many of the public, I feel, are aware in a broad and general way that the veterinary profession of Great Britain and Northern Ireland did a reasonable war-time job. There the majority of them are inclined to leave it, few realizing that in a country torn by war the responsibilities of the veterinary profession are greatly increased—the ever-present danger of epidemics which may interfere with the nation's food and milk supplies—the possibility of the importation from abroad of diseases such as rabies, which from a public health aspect could become a real menace to the life of the community: the mitigation of such possibilities, together with a diversity of operations, all vital to the successful issue of the war, was the task of the veterinary profession.

Can you imagine a country locked in a death struggle with animal diseases and epidemics sweeping throughout the land? Against such a possibility stood the veterinary services; whole-time and practitioner, each had a part to play. Mr. Ritchie has shown us it is a story well worth preserving; a story of which we all have reason to feel proud, and one on which I think the nation might well ponder.

In dealing with the highly contagious disease, foot-and-mouth, many outbreaks of which occurred in this country during the war period, the essayist has clearly shown the value of an alert and watchful veterinary service, which through the employment of heroic measures succeeded in keeping the disease from spreading and speedily stamped it out. We, in Northern Ireland, were fortunate in regard to this disease. This, I think, was due to the fact that our veterinary services strongly opposed the importation of meat from South America, and on those rare occasions on which it was landed, as salvage from ships, strict isolation measures were adopted, and the meat in question only permitted for use on deep-sea vessels.

The figures quoted showing the number of dogs surreptitiously imported into Great Britain are somewhat alarming, and the work involved in tracing these animals must have thrown an enormous strain on an already overtaxed service. It is unfortunate that in time of war, in fact, at any time, veterinary regulations which have freed the country from one of the most fatal diseases mankind has known should be treated with contempt, either through ignorance or from some silly sentimental point of view. A description or the sight of a case of hydrophobia might make these people realize the danger to which they are exposing not only themselves but their fellow man.

Mr. Ritchie, in reviewing the work in connection with the control of disease in dairy stock, has covered a very extensive field dealing with the Attested Herds Scheme, abortion, mastitis, infertility and Johne's disease. It is pleasing to hear that in spite of many difficulties the number of attested herds in the country has increased, and in the elimination of reactors from the different herds the comparative test has not failed in its purpose. I am afraid our experience in Northern Ireland has been less fortunate, but our misfortune has been a spur to greater effort, and I feel that as the result of the work on tuberculin testing by Drs. Lamont and Kerr, of the Veterinary Research Station, Stormont, much has been done to restore the confidence of the agriculturist and settle a major difference between the practitioner and his whole-time colleague. The details of this work have been discussed at an earlier meeting, and it suffices for me to say that from my experience of this new test the error in tuberculin testing which we in Northern Ireland found somewhat disconcerting has been reduced to an infinitely small figure. In this work some hundreds of animals were tested and the results verified on *post-mortem* examination by bacteriological and biological methods.

The occurrence of primary tuberculosis in the udder and uterus mentioned by the essayist and due practically in every case to irrigation is a sorry story and one from which we should all benefit. It illustrates the need for closer contact between the laboratory and field workers which can only be gained when laboratory services are greatly extended.

Mastitis is still the will-o'-the-wisp; in spite of much valuable research and the use of the newest drugs, the disease still remains one of the major problems of the dairying industry. Under the control scheme, an opportunity presents itself for closer co-operation between the clinician and the research worker, and I have no doubt science will ultimately triumph.

The work in connection with abortion and infertility is worthy of note, and while it is still yet too early to prophesy as to the efficiency of strain 19 in this country, reports so far are very encouraging. Infertility no longer presents a gloomy picture; valuable help can now be given to bridge the gulf between the barren and the milch cow.

*Meat and Livestock Control* (*N. Ireland*). The major war-time task imposed upon the veterinary profession in Northern Ireland was the purchasing, slaughtering, inspecting and distribution of all meat and meat products on behalf of the Ministry of Food. The extent and value of these operations may be gauged by the following statistics:—

(1)

| | *Cattle* | | *Sheep* | |
|---|---|---|---|---|
| *Year* | *No.* | *Value* | *No.* | *Value* |
| 1940 | 161,168 | £3,739,811 | 574,068 | £1,376,050 |
| 1941 | 246,448 | £5,655,570 | 411,234 | £1,037,501 |
| 1942 | 274,432 | £6,869,566 | 237,531 | £1,020,375 |
| 1943 | 233,092 | £6,215,293 | 263,106 | £775,357 |
| 1944 | 249,034 | £6,726,750 | 265,286 | £814,344 |
| 1945 | 318,097 | £8,336,916 | 289,911 | £943,792 |
| Total | 1,482,271 | £37,543,906 | 2,041,136 | £5,967,419 |

During the period under review, all cattle and sheep, surplus to the home requirements, were exported to Great Britain. Particulars as to the number and value of animals are as follows:—

(2)

| | *Cattle* | | *Sheep* | | |
|---|---|---|---|---|---|
| *Year* | *No.* | *Value* | *No.* | *Value* | Total Value |
| 1945 | 156,590 | £4,822,516 | 17,158 | £56,047 | £4,878,563 |
| 1944 | 96,122 | £2,946,123 | 13,647 | £41,226 | £2,987,350 |
| 1943 | 76,979 | £2,311,919 | 22,159 | £64,473 | £2,376,593 |
| 1942 | 111,467 | £3,051,492 | 55,726 | £150,901 | £3,202,394 |
| 1941 | 107,992 | £2,641,054 | 71,074 | £180,439 | £2,821,494 |
| 1940 | 54,041 | £1,351,452 | 338,347 | £809,854 | £2,161,306 |
| Total | 603,191 | £17,124,556 | 518,111 | £1,302,940 | £18,427,700 |

I am sorry to occupy time with statistics, but I feel they are essential if I am to do credit to one of the branches of veterinary work which is new to the profession. I can well recall when this scheme came into operation how the "know-alls" held up their hands in fear, saying it could not be done. What did we, as a profession, know of purchasing animals? We were not dealers. No, sir, we never pretended to be, nor were we asked to be. The task was to purchase animals of a certain quality at a certain price. Surely our calling has fitted us to know our patients in health as well as in disease. Personally I am speaking from the watch tower—I am only the recorder of events; but it has been my good fortune to be closely associated with this "child of war" and I can assure you that not only has the scheme been a success,

but, what is more, we have retained the confidence of those whom we have the honour to serve.

Animals are purchased at some 68 centres which are visited by the veterinary officers who are solely responsible for the grading and purchasing. Apart from fat stock, many worn animals are purchased at these centres at a dead weight basis. The economic prices offered for these animals have induced many dairymen to cull their herds of the older cows, many of which were previously retained until they became infective. I believe this outlet has done much to reduce the incidence of tuberculosis in our dairy herds. Moreover, it removes these animals from the grasp of unscrupulous dealers and thereby prevents their movement from farm to farm, and perhaps their ultimate slaughter for human consumption without adequate inspection of the carcase.

One may ask, does the killing out percentage of these animals support the judgment of the purchasing officer? I say definitely "Yes" and in support of this let me quote the returns for the year 1945:—

(3)

*Cattle*

| Quarter Ended | No. | Average Weight Estimated | Average Weight Actual |
|---|---|---|---|
| March | 38,153 | 525·49 | 524·71 |
| June | 28,407 | 513·80 | 509·47 |
| Sept. | 24,930 | 527·27 | 526·40 |
| Dec. | 27,948 | 520·48 | 514·99 |
| Totals | 119,438 | 521·91 | 519·16 |

*Sheep*

| Quarter Ended | No. | Average Weights Estimated | Average Weights Actual |
|---|---|---|---|
| March | 22,769 | 44·19 | 44·72 |
| June | 44,257 | 50·32 | 49·64 |
| Sept. | 109,211 | 45·94 | 45·48 |
| Dec. | 93,508 | 43·39 | 43·28 |
| Total | 269,745 | 45·45 | 45·34 |

The onset of war saw the closing of private slaughterhouses and the establishment of centralized slaughtering under veterinary control. For some years prior to the war, the inspection of all pork factories and curing establishments was entrusted to the veterinary services. So, to-day, in Northern Ireland, the responsibility for the inspection of all meat and meat products rests entirely with the veterinary profession. As a result of these changes, we are in the unique position of having a uniform standard of meat inspection throughout the country, ensuring that all meat sold to the public is free from all those conditions enumerated in Memorandum 62 (Foods) of the Ministry of Health. Further, the elimination of waste of good and valuable by-products and the raising of the standard of hygiene to a point of efficiency not possible under the system of private slaughtering are points worthy of mention.

In the scheme, the employment of slaughtermen and the supervision of their work is a further duty of the veterinary officer, together with the responsibility for the collection of all offal, hides and by-products, and the allocation of meat to the retail trade. Some idea of the volume and nature of this work is shown in the following tables for the year 1945:—

(4)

*No. of Animals Slaughtered*

| Cattle | Calves | Sheep | Pigs |
|---|---|---|---|
| 135,525 | 25,522 | 271,636 | 2,226 |

In addition to the above, in the roll and ham trade, 72,832 carcases, valued at £843,637, were dealt with and 51,000 pigs, valued at £605,000, passed through the Wiltshire factories and were inspected by the veterinary staff.

(5)

*No. of Carcases of Frozen Meat Examined and Issued*

| Mutton and Lamb | Pork | Wholesale Value |
|---|---|---|
| 114,648 | 16,423 | £229,760 |

In addition to the above, 1,630 tons of canned corned meat were examined and issued.

As the war progressed, the need for pharmaceutical liver and glands became very acute, and an attempt at collection of these products was made. Apart from meeting an urgent demand, the financial returns fully justified the work, and in the year under review amounted to £10,767 6s. 7d.

(6)

*Value of Offals, etc.*

| Blood | Inedible Offal Condemned Carcases | Edible Fat | Tripe, Feet, etc. |
|---|---|---|---|
| £1,374 2 4 | £6,211 10 8 | £52,873 11 10 | £24,841 13 6 |

| Cattle Feet | Horns | Sheep Gut | Blood |
|---|---|---|---|
| £2,259 14 11 | £166 8 2 | £584 15 1 | £416 5 0 |

| Hides | Calf Skins | Sheep Skins |
|---|---|---|
| £225,462 15 9 | £7,514 17 5 | £49,442 9 0 |

General Summary of Operations—1945

| | | |
|---|---|---|
| (1) | Purchases of Cattle ... ... ... | £8,336,916 |
| | ,, ,, Sheep ... ... ... | £943,792 |
| (2) | Sales: | |
| | *Shipments to Great Britain:* | |
| | Cattle ... ... ... | £4,822,516 |
| | Sheep ... ... ... | £56,047 |
| *Abattoir Sales:* | | |
| | Meat and Offal ... ... ... ... ... ... | £3,410,496 |
| | Imported Frozen Meat ... ... ... ... | £258,632 |
| | Canned Corned Meat ... ... ... ... ... | £235,644 |
| | Other Sales of Offals ... ... ... ... ... | £86,982 |
| | Hides and Skins ... ... ... ... ... | £282,420 |
| | Glands and Cirrhotic Liver ... ... ... ... | £10,767 |

These figures show more adequately than any words of mine not only the magnitude of the work under the Livestock and Meat Control Scheme carried out by the Veterinary Services in Northern Ireland, but that veterinary interest can well be carried past the stage of production and extend successfully to aspects of marketing and distribution.

For obvious reasons these figures could not be published during the war years, and I am deeply grateful to my colleague, Mr. James McAllen, M.A., M.R.C.V.S., Assistant Secretary, Ministry of Agriculture, for the opportunity to do so now.

The inception of the Livestock and Meat Control Scheme made imperative the modification of certain pre-war programmes, *e.g.*, it was necessary to transfer personnel to this work largely at the expense of duties under the Milk and Milk Products Act, and to a lesser extent the Diseases of Animals Act.

With the diminishing national crisis and the new conception of the necessity for a National Milk Policy, the position was reviewed with the passage of the 1944 Milk Act, and the veterinary services were called upon to undertake not only the inspection of more than 12,000 previously unlicensed milk producers, but also to re-inspect and retrieve the position in respect of 12,000 licensed holders already in existence, and to do this without ceasing the work necessitated by our activities on behalf of the Ministry of Food and our less spectacular activities under the Diseases of Animals Act.

It is pleasing to record that after twelve months, from our point of view, the milk inspection duty was never in a more satisfactory state or showed more evidence of enormous returns for the work and cost expended.

The country has been divided into 34 sections, and in each of these sub-areas there is stationed a veterinary inspector who is responsible for all routine duties under the Milk and Milk Products and the Diseases of Animals Acts. Each officer deals with all milk licence holders in his area, irrespective of grade, and we are inspecting all milk-producing animals, irrespective of whether the owner holds a milk licence or not. Thus, for the first time, we have a regular inspection of all milch cows in Northern Ireland. The number of licensed milk holders has increased from 24,892 to 25,596 during the year 1945.

Throughout the country there are some 13 milk depots, the majority complete with pasteurizing plant, so that 70 per cent. of the country's total milk supply is pasteurized, while in Belfast this figure reaches the high level of 90 per cent.

Several cross-Channel firms have established centres for the manufacture of milk products.

All these different units are directly under the surveillance of the veterinary officers whose duty it is to visit at frequent intervals and advise on all matters pertaining to veterinary hygiene. It is pleasing to note that apart from meeting the local demands for human consumption and the need of the different manufacturing establishments, we are in the fortunate position of being able to supply to Scotland during the winter period some thousands of gallons (30 000 to 60.000 gallons) of pasteurized milk per day.

There are many further aspects of the war-time veterinary services I would have wished to have dealt with, but I am afraid I have already spoken at too great length. May I conclude by hoping

that our war-time contribution to the health of the people, by ensuring a wholesome and adequate meat and milk supply, and by protecting the public from many diseases transmissible from the lower animal, has justified our claim to be the only body competent to deal with the problems of inspection of foods of animal origin, and with animal health and disease.

**Mr. L. Guy Anderson** (Aylesbury), who was the second opener of the discussion, said: This discussion of the war-time achievements of the profession does appear to divide itself into two definite aspects, the aspect of the whole-time man and that of the private practitioner, but before going any further into discussion it should be stressed that this division was made simply for the convenience of the discussion. In actual fact there is no real division, as the work of the Animal Health Division and that of the practitioner are closely interlinked and dovetail towards a common objective.

My remarks will be mainly concerned with that aspect raised by Mr. Steele-Bodger and I would like firstly to pay a very great tribute to Mr. Steele-Bodger himself. He has given an account of the work of the Association, particularly with reference to the work of the Survey Committee, and he mentioned quite a number of individuals who put in a tremendous amount of work in the development of the "Panel" scheme, but it must be borne in mind that Mr. Steele-Bodger was the father, at any rate, of the scheme; he has been Chairman of the Survey Committee since its inception and it is right to say that he has been the driving force and inspiration behind all the splendid work that that Committee has done. (Applause.)

Mr. Steele-Bodger seems to have a lot of attributes because he is also a good orator and that makes the position difficult for those who follow him. He set a very high standard and this is not a very easy subject to discuss. The work and the efforts of practitioners were not in the main spectacular: it was made fairly clear at the outbreak of war what the job of the veterinary surgeons was and that was simply to intensify their efforts to do all they could in agricultural practice, and I think it is quite evident that that was done. The ordinary general practice soon after the outbreak of war had to be considerably reorganized. The bias was changed and agricultural practice, particularly perhaps that pertaining to the dairy cow, did become the most important line of work which had to be tackled with especial reference to preventive medicine and to herd treatment as opposed to individual treatment. This meant that in an ordinary practice the methods of running it had to be very considerably changed and a great deal of additional work was put on the practitioner. It is interesting to note that although the amount of agricultural work has been at least doubled in many practices, this was not due so much to an increase in the number of clients but to the increase in the amount of work that individual clients required to have done. This is a very encouraging sign as it means that the stock-owner knows a little more about the veterinary surgeon and appreciates a little more what he can do to help in the management of their flocks and herds.

Although the bias of practice is towards herd treatment and preventive medicine, I do not think the individual type of work which has been done should be ignored. The enhanced value and importance of the individual animal naturally has encouraged practitioners to improve their surgical technique and to use the most modern and effective drugs in individual treatments. Great advances have been made here, particularly perhaps on the surgical side, and a very useful contribution has been made. As practitioners we must never neglect the treatment of the individual animal.

I would like to make some small reference to small-animal practice during the war years. The actual value of the pet from a national point of view is a little difficult to assess and naturally one does pay more attention to the obviously economic and food-producing animals, but I think most practitioners continue, very rightly, to do a large volume of small-animal practice. The household pet is a big factor in British life even in war-time, and the correct and proper treatment and attention to the small animals is important. All of you know the kind of story told so frequently during the war. People would come into the surgery with a dog, "This is my boy's dog; he is a prisoner of war and if he comes back and anything has happened to the dog I do not know what will happen." One knows how much it means to the individual concerned and those who engaged in small-animal practice during the war have made a very big contribution towards the war effort—principally, perhaps, in helping to maintain morale.

Mr. Steele-Bodger has mentioned the demonstrations which were given by members of the profession during the war. I wish to draw attention also to other work which was done to help the general educational programme which the Ministry of Agriculture set up. Many veterinary surgeons gave up evenings to attend "Brains Trusts," to talk to Young Farmers Clubs, to talk to discussion societies, to attend meetings, and conferences arranged by the War Agricultural Executive Committees and in this way they made a big contribution at considerable sacrifices to themselves in order to extend education amongst the stock-owners.

One of the great difficulties was the shortage of man-power, professional and lay, both important in the management of a practice. This is temporary. It is most important to bear that in mind. When it is remembered that something like 400 veterinary surgeons were serving in the Royal Army Veterinary Corps and 50 or 60 others in other branches of the Service out of a total of about 3,500 members in this country, it will be realized that a fifth or a quarter of the younger men were not available during the difficult years of 1943, 1944 and 1945: but it is quite wrong to assume that because of that there is a definite and permanent shortage of veterinary man-power. I think it is true to say that if the profession is given the opportunity of doing all the work which it should do its numbers should be increased considerably but there is not sufficient shortage to justify any lack of immediate positive action. I mention this particularly because I wish to support Mr. Steele-Bodger in his criticism of the Ministry in curtailing the attested herd scheme at the beginning of the war. In my view that was an absolutely unnecessary step. There are figures available showing the number of attested herds in the country but even that does not give a true picture of the extent to which tuberculosis eradication has proceeded. There are, I suppose, for every attested herd in the country, one or two herds with a tuberculin tested licence which are progressing towards attestation; there are plenty of others which are tested privately where the disease is steadily being eradicated from the herd, and the tremendous increase in the number of attested herds which occurred in 1944 and 1945, when the increased bonus was given on the milk, at a time when man-power was at its lowest, is very clear evidence that the man-power was there to do the job and great progress could have been made during the war years on tuberculosis eradication had a more imaginative policy been followed with a rather less cumbersome test and had the administrative side been reduced by allowing the man in the field to make his own diagnosis.

The position with regard to meat inspection in Northern Ireland is particularly interesting; it is a very great reflection on this country that the same conditions do not pertain here, especially with the opportunities which occurred during the war years with the centralization of slaughtering.

A great deal has been said about what the veterinary surgeon has done during the war. I would like to pay tribute to what the veterinary surgeon's wife did during the war. (Hear, hear.) Many of our women-folk were working under the most difficult conditions but in spite of that they turned to and were not only mothers, housekeepers and nursemaids, but were also kennel maids, anaesthetists, secretaries, telephonists and "Goodness only knows what else." I think that great appreciation of what they did should be put on record. (Applause.)

In conclusion, I wish to try to review the war-time achievements and efforts in a somewhat objective light. It would be true to say that in 1938 the profession was at a somewhat low ebb owing to mechanization of road transport, and of the Army, the very bad condition of agriculture, and the lack of appreciation on the part of the authorities of the necessity of good meat and milk hygiene measures. The war and what it entailed was a challenge which was gladly accepted and veterinary surgeons have no reason to be ashamed of the way they dealt with it. I think there has been a reformation in the profession during the war years; it has proved beyond any question of doubt its rightful place in the affairs of this country. It has shown that it has a job to do and that it is capable of doing it—a job which is comparable in importance to any other which has to be done during this difficult reconstruction period. The members of the profession are quite determined that they are going to do this work and the only reward we ask for our war effort is that the authorities concerned shall recognize our true place in the scheme of things, the importance of the profession and its work and the status which it must hold in the eyes of the public. We ask for that recognition as our reward. I will go further and say that we demand it and are prepared to fight for it. We can look back upon these war years with some pride. One of our achievements is that the profession now is absolutely united and resolutely determined to progress and to make the best possible contribution which it can, not only to the years of war but to the years of peace. (Applause.)

Mr. J. S. Steward (Wilmslow) said that Mr. Ritchie had put a good face on what the Ministry had done in the war. It was the right of the Englishman to criticize a State department and he proposed to deal with the subject from the opposite angle to

Mr. Ritchie, namely, what the Ministry had failed to do. He thought the organization of the Ministry of Agriculture Animal Health Division was founded on sand because its organization was based on the administrative divisional office rather than the laboratory which would have provided the fullest diagnostic facilities to both part-time and whole-time personnel. The lack of foresight in this had resulted in inadequate development of a scientific department. The history of the Animal Health Division was one succession of missed opportunities and he regretted having to draw attention to them. There were three major points, the fourth was the failure to omit the second injection in the tuberculin test.

The first was milk and the failure to implement the highest traditions of the public health standards set up by the local authorities. Tuberculin testing was right as a long-term measure but in the interim it was absolutely essential that something should be done to render milk safe and that could be done by biological testing of herd milk samples taken by the veterinary surgeon after routine inspections. There were very few who had had routine experience of their clinical work being checked up by the guinea-pig—he would estimate that there were less than a dozen in this country—and he did not know of any one of them who would disagree with the statement that clinical inspection should be followed by testing of the herd milk sample with the guinea-pig. Unless the Ministry initiated a scheme for the safety of the milk supply on those lines the value of the profession in milk safety would never be fully known. There was no means by which the profession could so quickly earn the esteem of the public and the medical profession as by the adoption of higher public health standards in milk and meat control. He did not under-estimate the importance of the careful clinical examination—although he was satisfied that the Ministry did not recognize its value as their staff were not supplied with diagnostic tools. The number of inspectors who examined a cow's chest without a stethoscope was appalling; some said the stethoscope was no good—but they had not tried it often enough on tuberculous cows; it was merely a matter of diligence and experience.

A retrograde step was the White Paper on Milk which reduced the inspection of cows in some herds to only once per annum and that had had a deleterious effect on herd health.

The second major lost opportunity was the failure to institute veterinary control of meat inspection when the Ministry of Food took over the centralization of slaughterhouses in 1939. No excuse should be accepted for that. A serious result of the nationalization of the County Veterinary Departments had been the loss to the profession of a number of borough veterinary appointments. These at one time were the stepping-stone for the county appointments, now they were a dead end. The profession had lost at least eight whole-time borough veterinary appointments, which was a serious loss.

The third major missed opportunity was an animal health problem and that was swine fever eradication. No one would deny that Doyle's vaccine would give good protection but it had not been discussed in the profession as to whether it was the proper procedure for this country. At no time had there been a better opportunity for eradication of swine fever than when the population of pigs was so low. If eradication of foot-and-mouth disease was justified and could be carried out, how much easier was it for swine fever, in which infection was confined to one species. Furthermore, as the infection was supposed to die out without the need for disinfection it eased the burden of eradication. The fatality from swine fever on infected premises was so high that clearly slaughter was indicated as soon as the disease was diagnosed. The mortality was not less than 75 per cent., so that there was good reason for slaughter to be undertaken to conserve food. The Ministry might say they had tried the slaughter policy and it had failed, but that was when the diagnosis of swine fever included paratyphoid. Now, however, modern methods of diagnosis should be used—he referred to a biological test for swine fever. Doyle's vaccine would be used for this purpose to immunize pigs, and material from suspected but clinically unconfirmed cases could be inoculated into vaccinated and susceptible pigs. Further, clinical diagnosis should be decentralized and so should power of slaughter. Vaccination as a means of control would be an unceasing heavy expenditure, whilst eradication would have decreasing costs as it succeeded and lower annual maintenance.

In summing up, he would emphasize that the profession's value to the State was immeasurably greater in public health than in the matter of animal health. It was thought that animal health was important, but no one would deny that the health of man was more important, and he would plead that more attention should be focused on their public health value: meat and milk were first priorities and if these obligations were fulfilled he could not imagine that anyone would quibble with the "National's" proposed salary scale for the whole of the veterinary staff of the Ministry.

These criticisms were not directed at Mr. Ritchie, who had not been in high office very long and could not have made himself felt in matters of policy, but he hoped that when the next Chief Veterinary Officer was appointed he would be responsible to no layman other than the Minister of Agriculture.

Mr. S. Jennings (Edinburgh) said that there were three points in Mr. Ritchie's paper on which he wished to comment. The first was to disagree with what he had to say about deaths following inoculation with abortion vaccine. He gave the number as eight. Admittedly the percentage number of deaths was so small that it was hardly worth while to quibble. Since, however, the paper contained such accurate statistics the speaker thought that the sentence referring to these might have been worded differently. Instead of adding that in every case it was proved that death was not due to vaccination he should have said that in no case could it be proved that it was due to vaccination. As three of these cases occurred in his own hands he had reason to feel strongly about it and although the Ministry's representative who came down to investigate the deaths continually asserted that he could not in any way associate the deaths with the vaccine, it did not alter the facts and while he was ready to agree that it could not be proved that it was the vaccine, on the other hand no other possible cause for the sudden deaths could be found.

The other point was in connection with Johne's disease. The inclusion of this disease in the Panel Scheme had always been a little joke because there was so little that could be done, but he had found it useful to send away dung samples for laboratory examination even though the cost of this had not been provided for in the scheme. In spite of what they had heard at Compton the day before, he still felt that the microscopical examination of faeces was very useful in confirming many cases early enough to be of use in getting rid of infected animals long before they became obvious clinical cases and he would like to see the free examination of faeces samples provided for under the Panel Scheme; although late in the day he still thought it was worth while doing it now

With regard to poultry, Mr. Ritchie's paper rather gave one to believe that the use of arsenicals in blackhead in turkeys was not very efficacious and would not encourage those who had not tried it to do so, but he had always found the use of arsenicals extremely efficacious in turkey work, and he would like to recommend to fellow members the use of arsenicals as a great deal of help could be given to farmers in that way.

Mr. E. W. Little (Dublin) said that he came as a visitor from Eire and would like to say that he looked with amazement and envy on the work which had been accomplished during the war years on the reduction of disease in flocks and herds. It was a case of history repeating itself. He came across a reference to an outbreak of rinderpest in this country in 1745 when the forebears of Mr. Ritchie were invading from Scotland and in spite of that the first sanitary laws with regard to disease in animals were inaugurated by the introduction of very fine regulations for the control of rinderpest which was then ravaging the country and which included compensation for animals slaughtered. History related that the retreating Scottish army took a lot of cows back with them and took rinderpest as well.

He would like to refer to the remarks of Mr. McLean on what had been done in the north of Ireland, and would mention that although a number of animals were exported from the north of Ireland the greater number were only shipped from the north; they were south of Ireland animals which were forwarded to the north for shipment because Eire was short of ships. Both north and south, however, did their utmost to keep up food supplies for Britain during the war. He would thank Mr. Ritchie for his very fine paper.

Mr. H. E. Bywater (West Ham) thanked Mr. Ritchie for his comprehensive paper. The Association had for many years been pressing for a report from the Animal Health Division of the Ministry of Agriculture and he hoped this contribution was not to be considered as that long-delayed report but merely a preview of things to come. Mr. Ritchie mentioned that melitensis had not occurred in this country as a result of infection by cattle. Was that the official view of the Ministry of Health because he had heard it asserted that cases had occurred in this country from cows due to an organism indistinguishable from *Brucella melitensis*.

There were two black spots reflected in Mr. Ritchie's contribution, namely, the failure to grasp the opportunity offered with regard to the control of milk from the public health aspect and also the control of meat from the public health aspect. He would not deal with the White Paper on milk and the tragedy which followed it, but he would say that he thought Mr. Ritchie would have been wiser if he had avoided rather than skated lightly over the question of meat inspection. Mr. McLean and Mr. Little had shown that our Irish confrères were very important persons

in connection with the meat industry. He wished the same could be said with regard to England and Wales. The tragedy of the war was that meat inspection had been thrown away; it had been lost to the profession. What had the Ministry of Agriculture done with regard to meat inspection? It had lent some of its personnel to assist the Ministry of Food but the Ministry of Food were employing two non-veterinary inspectors to confer with meat inspectors and try to coerce them to lower their standard of inspection.

With regard to Mr. Steele-Bodger's paper, he eulogized a great many members of the profession for the work they did with regard to A.R.P. Some of these people were in jobs where they were receiving a salary which was not materially altered by the advent of the war, whereas the private practitioner was faced with a financial crisis but he very nobly came forward and worked for nothing for the community. Amongst those members of the profession who did noble work none could claim to have pulled his weight greater than the man who had acknowledged the others —Mr. Steele-Bodger. He said, without fear of contradiction, that never had a President of the Association put in more work at more cost than had Mr. Steele-Bodger. (Applause.) Shakespeare told how a very wily public orator once said "The evil that men do lives after them, the good is oft interred with their bones," and he believed it was George Washington who said: "The man who never made a mistake never made anything." It was human to criticize people and forget their good points, but the good which Mr. Steele-Bodger had done far outweighed any mistakes which other people might consider he had made—some might consider as mistakes acts which others would consider a good performance.

With regard to air raids, he never experienced the joy of going to Winchester but he went to Tamworth on two occasions; each time there was a raid warning and, as he was informed that it had not happened before, he did not go there any more. (Laughter.) Mr. Steele-Bodger had mentioned the petroleum liaison officers and he, too, would like to pay a tribute of deep gratitude to the divisional petroleum officer, and particularly to the London Petroleum Regional Officer and his staff, for their sympathetic consideration to the veterinary profession which was treated with very good will. The veterinary profession received better treatment than many other professions.

On the war-time financial achievements, he would remind his hearers that not only did the Association vote the sum of £1,000 to the Benevolent Fund for blitzed practitioners, but it voted a sum of £2,500 to the Veterinary Educational Trust, it fought a successful action in the House of Commons which cost another £1,400—all this from a very small and relatively poor profession. Although the Association was hard up it was not yet in the bankruptcy court. If ever the history of the veterinary profession during the war years came to be written impartially, he was certain it would be found that no section of the community could boast of a better record than that profession during war-time.

### The Replies

Mr. Ritchie, in reply to the discussion, said that on the question of the biological tests of milk, clearly there was not any doubt that a systematic sampling of herd milks for tuberculosis and following them up would be an excellent contribution to the control of tubercle in the milk supply. All would appreciate that the need for such a course would vary from district to district and the opportunities of doing it had not been available equally throughout the country during the war. Many local authorities who had the facilities did in point of fact take a very large number of samples which were followed up.

The question of the frequency of inspection was also a very difficult one to make uniform throughout the country. What had been done was an effort to see that the greatest amount of inspection was given where the greatest need arose and the number of inspections was reduced purely from a public health point of view where the milk was heat-treated. He agreed entirely with Mr. Jennings that the phrase regarding the strain 19 vaccine as being the cause of deaths of animals might have been more happily worded.

There was one point in what Mr. Bywater raised, about the human infection with *Brucella melitensis*, which needed a definite answer. He had said that no such cases arose in connection with the outbreaks amongst cattle either on the farms or in the districts which were involved and he did not know of the occurrence of *Br. melitensis* infection in human beings, but they might occur. He did not think there was any record, however, that they had arisen as a result of the consumption of milk in this country.

There was little doubt that the profession as a whole had every right to be reasonably proud of its achievements during the war. Mr. Anderson made it quite clear that two separate papers were given for purposes of convenience; that was obvious. While he said that there seemed to be every reason to be proud of their achievements he thought perhaps the greatest achievement of all would be to follow the impetus given during the war and to carry forward the somewhat fresh conception of the uses which might be made of the veterinary profession into the more peaceful years when there should be more opportunity to exploit it.

Mr. Steele-Bodger, also in reply, referred to two points which he had missed; one was the help which the practitioner received under the Control Scheme from the Veterinary Investigation Officers. The part played by these Officers was one of increasing importance and value. It was a young service which all hoped to see extended. The Control Scheme afforded opportunities for collaboration which, in his view, did not before exist, and he would like to pay sincere tribute to the V.I.O.s. The Control Scheme, which had had many critics, had in his submission been amply justified. The educational value of the work to the profession and to the farming community had extended far wider than was supposed. It had penetrated into every section and every type of farming and its value was incalculable; if the Scheme had to finish to-morrow its inauguration would have been more than justified.

Mr. Jennings referred to the Johne's disease control in the Panel Scheme as somewhat of a joke. He did not think Mr. Jennings really meant that, but the speaker would emphasize that it was included because it enabled them to put over the necessity for taking preventive measures; the advisability of isolating calves in infected herds, and the risks of infection to calves at an early age. It was purely educational.

With regard to one point which had been raised, the criticism of the Ministry in reducing the number of herd inspections. He thought the profession should take this as a challenge. There was no doubt that the reduction of herd inspection was confusing the issue. Pasteurization was not an alternative to animal health, it was complementary to it, and until one had more frequent herd inspections they would not be doing their duty to the farming community. The value of quarterly herd inspections was not limited to 'udder punching'—these visits afforded an opportunity for discussion on various matters relating to the health of the herd or of individual animals whilst the examination was proceeding.

The Chairman (Professor W. McG. Mitchell) said that the papers had been complementary because they applied, in a sense, to the two sides of the membership of the Association, those in whole-time service and those in general practice, and as a result of their co-operation during war-time he thought the general public, the medical profession and agriculturists had come to appreciate better the efforts of the profession. The big problem now facing the profession was the attack upon tuberculosis, which called for a national uprising against this enemy.

He had hoped that Dr. Plum from Denmark might have given some account of what Denmark had done during the last few years, because in conversation he had told him that over 90 per cent. of their cows were free from tuberculosis, whereas in 1937 only 37 per cent. were free. There was plenty of hard work for everybody if we wished to reach Denmark's position within a reasonable time. By working together to eradicate tuberculosis from the cattle of this country we would gain immensely from the further appreciation of the usefulness of our profession by the community.

He proposed a vote of thanks to Mr. Ritchie and Mr. Steele-Bodger for their papers, which was accorded by applause.

## "WHITE LOAF NEVER TO RETURN"

Sir Jack Drummond, the nutritionist, addressing members of the Food Education Society, of which he is Chairman, said that the white loaf would never return, reports *The Times* in its issue of November 13th. The present flour extraction rate was a compromise between the highest possible nutritive value and the demands of popular taste. Dark flour, he said, was associated with the hardships of war and consumer complaints were mainly psychological. In June, 1940, when the Ministry of Food announced that calcium would be added to flour, hundreds of people complained that the new bread was difficult to digest. Many said that the new mixture aggravated arthritis. In point of fact, calcium had not been added at the time of the announcement because there had been none available. When it was introduced many months later, without publicity, there was no popular reaction.

Before the war there had been no scientific data to prove the best level of flour extraction. Government research workers, however, dissected the wheat berry under the microscope and discovered that the berry's scutellum and outer endosperm had a high vitamin B and iron content. Milling processes were revised and it was eventually decided that the flour extraction rate of 85 per cent., with its low bran content, had the best nutritive value.

## CLINICAL COMMUNICATION

### Erysipeloid in Man

A. R. JENNINGS, B.V.SC., M.R.C.V.S.

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The following personal experience of erysipeloid is recorded in the hope that it will be of some value as a guide to the diagnosis and treatment of similar cases. It would appear from the literature that erysipeloid in man is not uncommon.

King, F. K. (1946) surveyed 115 cases seen in a hand clinic and stated that he found it to be present in 5 per cent. of septic hands.

Barber *et al.* (1946) recorded seven cases, in five of which the diagnosis of *Erysipelothrix rhusiopathiae* infection was confirmed bacteriologically.

Klauder (1938) reviewed 100 cases and found that 58 per cent. arose in abattoir workers and 11 per cent. in persons handling fish in the retail trade.

As the references indicate, erysipeloid is an occupational disease. The causal organism is best known as being responsible for swine erysipelas but it has been isolated from a variety of different species including lambs, horses, cattle, fowls, turkeys and pigeons. In the majority of these species the circumstances are not such as to suggest the presence of *Erysipelothrix rhusiopathiae* infection and until the organism is isolated in culture its presence is unsuspected. It is thus obvious that veterinary surgeons whilst carrying out *post-mortem* examinations expose themselves to the risk of infection and as erysipeloid is invariably the result of wound inoculation, due precautions should be observed when conducting autopsies.

The infection in this case occurred during a *post-mortem* examination of ducks which had died from septicaemia. Whilst incising the gizzard of one bird, the knife slipped, penetrated the rubber glove on the left hand, and cut deeply into the thumb about the level of the distal joint. The wound was well washed immediately, and a dressing was applied.

Some 24 hours after the wound had occurred, pain and stiffness began to develop, although the wound appeared to be very healthy and healing well. At this point a local dressing of penicillin was applied. This however did not appear to influence the lesion which developed around the incision, in the form of a raised purple-red patch. This raised inflammatory area did not long remain localized. During the next 12 hours, marked swelling occurred and the thumb became approximately twice its normal size. There was relatively severe pain, and erythema was apparent in the palm of the hand and the wrist. From this point up to and during the next 48 hours there developed a lymphangitis, and the epitrochlear and then the axillary lymphatic glands became involved. The latter increased in size up to that of a pigeon's egg and was easily palpable.

Meanwhile a Gram positive organism resembling *Ery. rhusiopathiae* had been obtained in culture from the birds, and knowing that this organism was highly susceptible to penicillin *in vitro* it was decided to seek medical advice and treatment. (The organism was subsequently identified as *Ery. rhusiopathiae*, and its pathogenicity for the pigeon and mouse established.)

The position, then, at the end of 48 hours after infection was as follows: A marked local reaction with acute lymphangitis and lymphadenitis, together with slight systemic disturbance, feelings of nausea, and some pyrexia (101·8° F.). A blood examination at this point revealed a total white cell count of 15,250 per c.mm. and a differential count as follows:—

| | | |
|---|---|---|
| Neutrophils | ... ... | 82 per cent. |
| Lymphocytes | ... ... | 11 per cent. |
| Monocytes ... | ... ... | 6 per cent. |
| Eosinophils | ... ... | 1 per cent. |

This indicated a slight leucocytosis due, most probably, to the neutrophilia.

In this connection it is interesting to note that King (1946) stated that general symptoms are inconstant, that there is no rise of temperature and that regional lymphangitis and lymphadenitis are uncommon. Klauder (1938), however, found that lymphangitis was common and in 6 per cent. of the cases there was constitutional disturbance with fever. Both agree upon the lesion as being a sharply defined elevated zone of purple red erythema extending peripherally as the central area paled.

#### Treatment

The treatment of erysipeloid in those cases recorded has varied considerably, but until introduction of penicillin the various therapeutic agents appeared to have little influence upon the disease. The average duration according to King (1946), was from 14 to 33 days. Barber *et al.* (1946), however, reduced the duration of the disease to 48 hours (three cases) by the use of penicillin given intramuscularly, using a dosage of 20,000 units three-hourly.

In the case under review the calcium salt of penicillin was given intramuscularly every three hours. Eighteen hours after the initial dose the axillary gland was no longer palpable, and there was no evidence of a lymphangitis. The thumb appeared to be decreasing in size and the temperature had returned to normal. Penicillin was continued for another 24 hours, at the end of which time the erythema had disappeared and the thumb had an almost normal appearance except for some wrinkling of the skin. In all, a total of 200,000 Oxford units was given. In addition, 4 grammes of sulphamerazine was administered during the first 24 hours, and the inflamed area on the thumb was treated with hot fomentations.

The features worthy of note in this case are:—

(1) The somewhat unusual source of infection.

(2) The rapidity of onset of symptoms, the usual incubation period being from one to six days.

(3) The spectacular response obtained with the systemic administration of penicillin and sulphamerazine.

*Acknowledgments.*—I wish to acknowledge the kindness and co-operation of the staff of the Liverpool Royal Infirmary.

#### References

King, F. K. (1946.) *Lancet.* **231.** 198.
Barber, *et al.* (1946.) *Ibid.* 250. 125.
Klauder, J. V. (1938.) *J. Amer. med. Ass.* 111. 1345.

## ABSTRACTS

**[Hexachlorethane-Bentonite Suspension for the Removal of the Common Liver Fluke, *Fasciola hepatica*, from Sheep.** Olsen, O. W. (1946.) *Amer. J. vet. Res.* **7.** 358-364.]

As an aqueous suspension of hexachlorethane and bentonite had given favourable results with cattle for the removal of *Fasciola hepatica*, Olsen decided to test the preparation with sheep for the same purpose. After reviewing the literature dealing with hexachlorethane as a fasciolicide, the author describes the materials and methods used in his experiments, the results of which are given. A drench was prepared by mixing 500 grammes commercial hexachlorethane ground to finer than 60-mesh size, 50 grammes bentonite, ¼ to ½ teaspoonful white flour, and 750 c.c. tapwater. When combined these ingredients produced approximately 1,000 c.c. suspension having one part by weight of hexachlorethane to two parts by volume of the mixture. Olsen considers the mixture to be an effective agent in removing flukes from sheep when given as a drench, for out of 110 infected sheep each given 30 c.c. of suspension (*i.e.*, 15 grammes hexachlorethane), 104 showed no fluke eggs in their faeces after a single treatment. Of the remaining six animals, three showed little change in faecal egg counts which were originally 16 per gramme or less, and three showed 4 e.p.g. as compared with a premedication count of 60 to 112 e.p.g. Of four control sheep two died of acute fascioliasis and the other two yielded two adult and 38 immature plus 137 mature flukes respectively at autopsy. *Post-mortem* examinations of 13 sheep given 30 c.c. suspension revealed immature flukes in five animals and mature flukes in four, while of seven sheep given 60 c.c. suspension three had immature and one had adult flukes. It was noted that immature flukes were more resistant to hexachlorethane than mature flukes and that the highest survival of parasites occurred in livers showing the severest pathology. It is suggested that treatment be given during the season when fewest immature flukes are present in the host. The drug appeared to be well tolerated in doses much in excess of that required to remove the flukes although, in a postscript to his paper, Olsen reports instances of intoxication and death, without obvious explanation, amongst sheep in one locality after hexachlorethane treatment as well as after a standard dose of carbon tetrachloride.

J. N. O.

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**[Transmission of *Sarcocystis* to Swine.** Spindler, L. A., Zimmerman, Jnr., H. E., & Jaquette, D. S. (1946.) *Proc. Helminth. Soc. Wash.* **13.** 1-11.]

In view of the widespread occurrence of *Sarcocystis* in the flesh of animals used for food and because the life-cycle of the parasite has hitherto not been well understood owing to contradictory views and opinions concerning the mode of transmission expressed in the literature, the authors carried out investigations designed to obtain information on the method of transmission of the organism to pigs and on the clinical pathological effects of the parasites on the host. After outlining their experimental procedures, the authors describe the results of their experiments. It was found that pigs, dogs, cats, rats, mice and chickens, after eating the flesh of infected pigs, were capable of transmitting a stage of *Sarcocystis* infective to pigs. This stage was passed in

the faeces and/or urine of these animals and pigs became infected by ingesting such faeces or urine 15 days after the infected flesh had been eaten. When pigs were fed with faeces or urine passed by animals having consumed infected flesh before the 15-day period had elapsed, no infection resulted nor did pigs acquire infection when fed with infected flesh unless they consumed their own faeces and urine. Pigs fed with faeces or urine from pigs, rats and mice that had not ingested meat failed to become infected with *Sarcocystis* and showed none of the symptoms and lesions observed in infected animals. Pigs fed with heavily infected flesh showed, in some cases, transient but none the less violent reactions indicative of a toxaemia. Symptoms included vomiting, diarrhoea, inappetence, weakness of the loins, and temporary posterior paralysis, while the growth rate was markedly retarded for about two months after recovery. Pigs fed with faeces and urine passed by animals having consumed infected flesh showed symptoms of unthriftiness, weakness of the loins, and temporary posterior paralysis, sometimes recurring at intervals. The most severely affected pigs were found, at *post-mortem* examination, to harbour the heaviest infections and, in general, it was noted that infections of 40 or more sarcocysts per gramme of diaphragm tissue were associated with unthriftiness and stiffness of the muscles. The heaviest infections were found in those animals which had ingested the greatest amounts of urine along with the faeces. At *post-mortem* examination of infected animals the lesions found were enlargement and paleness of the kidneys and hyperaemia of the mucosa of the stomach and intestines.

J. N. O.

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[**Distemperoid Virus Interference in Canine Distemper.** Green, R. G., & Stulberg, C. S. (1946.) *Science*. **103**. 497.]

This paper gives a brief description of an experiment demonstrating the interference phenomenon with Green's ferret-adapted distemper virus—"distemperoid virus"—and a strain highly virulent for foxes. Four groups of ten red fox pups each received the virulent strain by intranasal inoculation. The first group received no further treatment; by the 16th day all were showing symptoms of distemper and all subsequently died. The second group received a simultaneous intramuscular injection of distemperoid virus; five animals showed symptoms of distemper but all recovered. The third group received distemperoid virus intramuscularly three days after the virulent strain; two foxes showed symptoms but recovered. The fourth group received distemperoid virus intramuscularly twelve days after the virulent strain; four showed symptoms but all recovered. This result confirms earlier clinical observations that the distemperoid virus may be successful in treatment as well as in prevention of the disease.

W. M. H.

## DORSET'S BAN ON UNTESTED IRISH CATTLE

"Agricultural committees in the West of England will shortly have to decide whether they will adopt the Dorset decision to ban the sale of untested Irish cattle," states *The Farmers' Weekly* in its issue of November 15th, and adds: "The decision, taken by the Dorset Diseases of Animals Sub-committee under delegated powers, has aroused great interest throughout the West. Neighbouring counties of Somerset, Wiltshire, Hampshire and Devon are to be asked to follow Dorset's lead. As a result of the decision, no licences will be issued for the sale of imported Irish cattle in Dorset markets 'with the exception of such cattle as have passed a tuberculin test within 14 days prior to shipment.'

"Describing it as 'an important decision,' Mr. H. W. Dufosee, Sub-committee Chairman, told the Dorsetshire Agricultural Committee: 'It will not be a 100 per cent. cure for our troubles, but it will show everyone that this Committee wants tuberculosis-free herds in this county. If we take the lead, other counties may follow us. We have tried to get the Ministry to do something in the past, but through the war years it has been impossible. We just had to get the cattle to get our milk.'

"Criticism of action on a county basis was voiced by Mr. J. Strang, who thought it a retrograde step to try to do it by counties. Until it was done nationally, they would be driving business away from the county."

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### Weekly Wisdom

*The evil in which applied science can abet bad men far exceeds the good which it can help good men to realize.*—Paul Bloomfield.

# Questions and Answers

**The submission of questions for inclusion in this column will be welcomed: they can relate to any aspect of veterinary work. For purposes of record, each question is numbered, and those submitting questions are required to furnish (not for publication) name and address.**

**Answers to readers' queries represent exclusively the personal opinions of the writers, and criticism of the replies will be appreciated.**
**All communications should be addressed to the Editor.**

### Infertility in Bovines

**Q. CLXXII.**—*What is accepted to be the best line of treatment in the following cases?*

1. *Maiden heifers showing no signs of oestrus even at grass.*
2. *Maiden heifers showing oestrus at irregular periods—at 25, 30 and 35 day intervals.*
3. *Maiden heifers returning to service.*
4. *Apparently "clean" cows returning to service.*
5. *Cystic ovaries in multigravid cows.*

**A.**—A complete answer to the above series of questions would appear to be beyond the scope of the "Q. and A." column, as it embraces almost the entire range of the commoner problems associated with infertility in bovines, and would require a text-book or symposium in itself. There are many opinions as to the "best line of treatment" in the cases mentioned by the questioner, and what follows is merely the opinion of one individual based rather on practical experience than on theoretical considerations.

The first point to be borne in mind—one which cannot be too strongly emphasized in *all* infertility work—is that *every* case must be examined individually or treated according to the findings of a most thorough rectal and/or vaginal examination. On this depends the success or failure of treatment. For instance, a case was recently brought to the writer's notice, where a very large dose of stilboestrol was given to a heifer to induce oestrus, and 48 hours later she aborted a four-month foetus: had an adequate examination been carried out first this would never have occurred.

1. The common finding in maiden heifers showing no signs of oestrus even at grass is that the ovaries are small, smooth and inactive, with no follicles. This condition may be treated by (*a*) addition of protein to the diet and (*b*) injection of 1,500 units of pregnant mare serum. Stilboestrol should *never* be used for the induction of oestrus; there is danger of producing cystic ovaries, and conception rarely follows service during oestrus produced by this means.

2. Expression of corpora lutea at about 14 days will frequently break into the cycle and allow of the resumption of a normal 21-day cycle.

3. This presents one of the most difficult problems in all infertility work. The bull's semen should always be examined for fertility. Routine examination of the heifers will often show one ovary smooth and non-functional, *i.e.*, no follicle formation. An injection of pregnant mare serum will often correct the condition, specially if coupled with an increase of protein in the ration. The writer has in the past had some success using wheat germ oil (an active source of vitamin E, and now again obtainable), 1 oz. being given orally after service and repeated the following day.

4. Expression of the corpora lutea and irrigation of uterus with Lugol's solution. If the cow again returns, good results may sometimes be obtained by irrigating the uterus with a weak Lugol's solution 24 to 48 hours after service. It is probable that in the majority of these cases there is some degree of endometritis present, which will tend to clear up spontaneously if not disturbed; the owner may, therefore, be advised to withhold service for two to three months. Wheat germ oil may also be used in these cases.

5. Single large cysts may be expressed manually with little likelihood of recurrence, and conception frequently takes place from service at the first normal oestrus after their removal. If, however, multiple cysts are present, frequent (*e.g.*, fortnightly) examination and, where necessary, expression must be resorted to. Prognosis is not very hopeful, though recent reports of the use of a concentrated anterior pituitary extract are encouraging.

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### Treatment of Mastitis with Sulphanilamide in Oil

**Q. CLXXIII.**—*Would you please tell me about the treatment of mastitis with sulphanilamide in oil—what kind of oil, how much, etc. Here in Denmark we know nothing about it, and we cannot get books to read.*

**A.**—The most recent work in this country on the preparation of a sulphanilamide emulsion for the treatment of bovine mastitis is by Edwards, S. J., and Brownlee, A. (1946.) (*Vet. Rec.* **58**. 335). Their method of preparation of this oil in water emulsion may be summarized as follows:—

The base consists of:—

Lanette wax, 1 gramme.
Arachis oil, 20 ml.
Sterile distilled water, 79 ml.

The wax and oil are sterilized by steam at 100° C. for one hour, the distilled water at a temperature of 100° C. is slowly added. This mixture is passed through a homogenizer and then 36·6 grammes of finely ground sulphanilamide is added, giving a final concentration of 30 per cent. sulphanilamide. The mixture is then cooled in a refrigerator until it becomes semi solid. Finally it is brought back to room temperature, stirred, and re-homogenized.

Using four daily injections each of 50 ml. of the above suspension, Edwards and Brownlee found that *Str. agalactiae* could be removed from 74 per cent. of infected quarters. A further course of four injections increased the total bacteriological cure to 86 per cent. of infected quarters. Marked clinical improvement, either immediately or in the subsequent lactation, resulted from the treatment.

The danger of the spread of tuberculous mastitis following intramammary injection is emphasized.

In America, an emulsion of sulphanilamide in liquid paraffin has been used by Kakavas, J. C. *et al.* (1942.) (*Amer. J. vet. Res.* **3** 274).

The method of preparation of this American product is to add 1 lb. (453·6 grammes) of finely ground sulphanilamide to 900 c.c. of light liquid paraffin (paraffinum liquidum leve) and to pass the mixture through a homogenizer or emulsifier. This gives an emulsion containing 0·378 gramme sulphanilamide per c.c. (38 per cent).

For streptococcal infections the dose recommended is 40 c.c. (15·12 grammes sulphanilamide) per quarter, this amount being injected once daily for four days by means of a 50 c.c. syringe with a rubber connection between the nozzle and teat syphon. Warming the suspension before use facilitates the injection. The quarter is well stripped out before treatment. Following injection the quarter is massaged and the suspension allowed to remain in the udder until the next milking.

For haemolytic staphylococcal mastitis the suggested dose is 80 c.c. per quarter once daily for four days.

Iodine in a final concentration of 1:2,000 may be added to the sulphanilamide suspension. (Sanders, D. A. (1941.) *Amer. J. vet. Res.* **2**. 407.)

The majority of workers report favourably on the non-irritant properties of the suspension and the absence of any adverse effect on milk yield.

According to American workers, the dosage given above will remove *Str. agalactiae* from 75 per cent. to 90 per cent. of infected quarters. Reinfection following treatment is likely to occur unless hygienic precautions are taken. Haemolytic staphylococcal infections are generally more resistant to treatment.

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### Sodium Iodide in the Treatment of Ringworm in Calves

**Q. CLXXIV.**—*Reports have been issued from time to time on the use of sodium iodide in the treatment of ringworm in calves.*

*Would information as to the dosage and efficacy of treatment, etc., be given?*

*Otherwise would the most modern forms of treatment be given?*

**A.**—The writer of this reply has found only one reference to the line of treatment suggested, *viz.*, a general article on intravenous medication by Krill (1940) in the *J. Amer. vet. med. Ass.* **96**. 220-224.

Krill says intravenous injection of a solution made by dissolving 90 grammes of sodium iodide in 500 c.c. of distilled water is good treatment. The dosage is 50 c.c. for yearling cattle, 75 c.c. for two-year-olds and 100 c.c. for adults. One injection is said to be sufficient in most cases.

He attributes this treatment to Case, but gives no reference.

Others, among the older remedies, are: salicylic acid 3 per cent. in 1 : 100 tincture of merthiolate; chrysarobin, 1 to 10 per cent. (dangerous about the eyes); oil of cade; or a lotion consisting of picric acid 7 gr., camphor and rectified spirit *aa* ʒss; brilliant green or gentian violet solution 2 per cent.; daily application of a 3 per cent. benzoic and salicylic acid ointment (this cures in one to three weeks); Whitfield's ointment; 10 per cent. ammoniated mercury ointment.

Two excellent new preparations are propionate ointment and undecylenate ointment. Kenney* and his colleagues found their action very superior, the former particularly so—being fungistatic, fungicidal and antibacterial, having a power of penetration and freedom from irritant properties. An effective, soothing and clean preparation recently used against mycotic infections is phenyl mercuric acetate (1 : 750). This is the active principle of the proprietary "Mersagel" (Glaxo). Cases of localized ringworm often clear up rapidly under this treatment. For a more generalized infection, the 0·2 per cent. phenyl mercuric chloride would be less vesicant and far safer. The writer cleared up an extensive case of ringworm in a Scottish terrier by only one application of this ointment, a spectacular result which has been achieved among humans by members of the medical profession.

* *Johns Hopk. Hosp. Bull.* (1944.) 75. 417.

## Sale Rules Relating to Contagious Abortion

In our issue of March 23rd (*Vet. Rec.* **58**. 133-135) we intimated that the National Cattle Breeders' Association had consulted the N.V.M.A. concerning the need for new rules at breed society sales in the light of the changed conditions, *i.e.*, the widespread use of Vaccine No. 1 for the control of contagious abortion. We published a commentary on a set of rules which the N.C.B.A. had recommended to the breed societies for adoption for their special sales. We noted then that only one breed society was known to have accepted them. Since then we have been informed that this society has reversed its decision and that no other adopted them. Many societies criticized the rules as impracticable and some suggested lines on which they should be redrafted.

In view of this, the N.C.B.A. invited representatives of the N.V.M.A. to further consultations and, as a result, a new set of rules has been framed. They have just been circulated to the breed societies and are published below for the information of the profession. The N.V.M.A. have asked that they be kept informed of the attitude of the breed societies so that the position may be reviewed from time to time in these columns.

The essential difference between the old and the new set of rules is that, whereas the former were drafted to try to close every loophole and ensure that each entry accepted was certainly free from infection or, if vaccinated, had reacted in such a fashion that it could almost certainly be accepted as immune but not infected, the new rules are designed to give only a reasonable degree of protection in these respects and to avoid cumbersome procedure. It is not claimed that the new rules guarantee the status of the animal as to contagious abortion. It is believed they will avoid fraud and reduce very materially the risk that infected cattle are exposed for sale. They are sufficiently easy of application to be practicable.

The rules are so simplified that they need little comment. No. 1 permits the entry of the animal negative to the agglutination test and accepts this negative reaction as good evidence that the animal, whether it has been vaccinated or not, is not infected with *Br. abortus*. The interval between the test and the date of the sale is almost dangerously long, but in face of the existing difficulties in printing sale catalogues, this period had to be accepted. Rule No. 2 makes it clear that animals which cannot be entered under Rule No. 1 will only be accepted if they have been vaccinated with *Br. abortus* vaccine No. 1 (Strain 19) and sets out the conditions under which vaccinated animals will be accepted. It will be noted from 2(*a*) that no pre-injection agglutination test is required when the animal is vaccinated as a calf, whereas 2(*b*) insists that an animal over eight months must have passed the agglutination test before its primary vaccination. Rule 2(*c*) allows revaccination, provided the original vaccination complied with either (*a*) or (*b*), at intervals of not more than three years.

Some practitioners may be surprised that the pre-vaccination blood test has been dispensed with in the case of calves. The opinion generally held is that reaction is so rare in the young calf and its significance so doubtful that it can safely be ignored. There may be some adverse comment on the dropping of the requirement of a post-vaccination agglutination test. Much discussion centred around this point. Some breeders thought it should be used as a means of checking the vaccine and the practitioner to make certain that viable vaccine had been properly injected. The majority were prepared to trust the producing laboratory and the profession to see that good vaccine was produced, properly stored until used and carefully injected. The representatives of the N.V.M.A. had no hesitation in accepting the onus placed upon the profession but undertook to emphasize this point in commenting on these sale rules. It was pointed out that failure to react after vaccination did not necessarily implicate the vaccine or its use, nor did it certainly indicate that the injected animal was not immune. In the end, and largely to make the rules easily workable, post-vaccination agglutination testing was omitted.

A point on which there was much discussion was the maximum period during which, for the purpose of these rules, it be accepted that the vaccinated animal would resist infection. Without clear evidence on which to base an opinion and with practicability much in mind, it was eventually agreed that the maximum period during which the vaccinated animal might be accepted as "safe" be put at not more than three years. It was generally accepted

that an animal which had been vaccinated more than three years previously should pass the agglutination test and be entered under Rule 1. It must be noted that nothing in these rules precludes more frequent vaccination—the original vaccination must comply with 2(*a*) or 2(*b*) and thereafter revaccination may be carried out at any time within three years.

The old bogy of the reliability of the agglutination test raised its head. It was pointed out that it played only a small part in these rules. It was further explained that the Ministry of Agriculture had recently agreed with the laboratories approved for agglutination testing for export that a standard antigen and technique be used in carrying out these tests. In these circumstances breeders' representatives modified their attitude to an expression of opinion that all agglutination testing should be done by "approved" laboratories and left it to the N.V.M.A. to make this suggestion.

We set out below the recommendations which have been sent to the breed societies and will publish information as to their acceptance as it becomes available so that practitioners may be in a position to advise their pedigree-breeder clients.

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National Cattle Breeders' Association

19, Bloomsbury Square, London, W.C.1

**Rules Recommended for Adoption by Breed Societies at their Shows and Sales of Cattle**

Males

An entry will only be accepted if accompanied by a certificate that the animal has passed the agglutination test within six weeks of the date of sale.

Females

1. An entry accompanied by a certificate that the animal has passed the agglutination test within six weeks of the date of sale may be accepted whether or not the animal has been vaccinated. If the vendor wishes to enter such an animal as vaccinated, the entry must be accompanied by a certificate of vaccination.

2. An entry which is not accompanied by a certificate that the animal has passed the agglutination test within six weeks of the date of sale will only be accepted provided it is accompanied by a certificate certifying:—

(*a*) That the animal was inoculated with *Br. abortus* vaccine No. 1 (Strain 19) when between four and eight months old and within three years of the date of sale;

*or*

(*b*) That the animal having passed the agglutination test was then inoculated within 14 days with *Br. abortus* vaccine No. 1 (Strain 19) when over eight months old and within three years of the date of sale;

*or*

(*c*) That the animal having been previously vaccinated in accordance with either (*a*) or (*b*) was revaccinated within three years of the previous vaccination and not more than three years prior to the date of sale.

The Committee recommend that the above rules should apply to those animals born on or after a date to be fixed by each Breed Society for its own Shows and Sales.

*N.B.*—(i) The word certificate in these Rules means a statement signed by a Veterinary Surgeon.

(ii) Agglutination tests must be made by laboratories which have been approved by the Ministry of Agriculture for the carrying out of this work for export purposes.

[The list of "approved" laboratories and other relevant information will be published as soon as received from the Ministry of Agriculture.]

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*British Society of Animal Production Conference Proceedings.*—The general topics dealt with at this conference in February were "Breeding Methods in Livestock Improvement" and "Artificial Insemination," and many of our readers will be glad to know that the authoritative papers then presented are now available in the report of the proceedings, obtainable, price 3s., post free, on application to the Secretary-Treasurer, Dr. J. E. Nichols, Imperial Bureau of Animal Breeding and Genetics, King's Buildings, West Mains Road, Edinburgh 9.

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At the annual general meeting of the Livestock Export Group, held recently at the Farmers' Club, Mr. R. W. Haddon, C.B.E., was unanimously elected Chairman.

## Veterinary Educational Trust Developments

### The Equine Research Station at Newmarket

Dr. Wooldridge's Address to the Thoroughbred Breeders' Association

As was the case last year, a feature of the annual meeting of the Thoroughbred Breeders' Association which was held at Newmarket on December 3rd under the presidency of Lord Rosebery, was an address by Dr. W. R. Wooldridge, M.Sc., M.R.C.V.S., Scientific Director for the Veterinary Educational Trust, on development of the activities of that important agency for the promotion of veterinary education and research.

Dr. Wooldridge said that during the year the earlier progress achieved had been maintained and to some extent increased. In reporting on further development, he did not intend to describe in detail the Trust's wider plans, but would restrict his remarks to the aims of the Trust in so far as the Equine Research Station at Newmarket was concerned. A year ago he had reported that they had three Research Fellows engaged upon investigations in connection with the horse. Of these, Dr. Burkhardt was continuing his work in connection with equine infertility, and Miss Ann Russell, at present gaining added experience in the United States, was proceeding with her work on red worm infestation. Both these investigators would shortly join the staff of the Research Station. Mr. Davison, who, a year ago, was working under the auspices of the Trust, left them in January to engage in specialist equine practice in Southern Ireland. They felt happy that Mr. Davison gained much valuable experience while working with them, and that the Trust was the means of converting a good young veterinary surgeon into a practitioner specializing in the horse.

"The most important change on the scientific side, however," proceeded Dr. Wooldridge, "has been the appointment of Professor W. C. Miller, M.R.C.V.S., F.R.S.E., as Director of the Equine Research Station. Professor Miller—one of the leading scientific experts of the profession—despite a wide experience in teaching and research has always maintained a lively interest in the horse and, indeed, in the early 'thirties, he was enabled through the generosity of this Association to devote special attention to certain equine problems. The Trust, and all those interested in the horse, I think, are to be congratulated upon securing the services of Professor Miller to direct the work of the Research Station.

"I cannot refer to the development of this Research Station without expressing our most grateful thanks to Lady and Miss Yule, who have, so generously, placed at our disposal their racing stables, Balaton Lodge, free of rent, and to Major Durham Matthews, who has likewise materially helped us to take over Lanwades Park. To these three benefactors, we owe our special thanks, but I should also like to thank all those who have supported the Trust and, particularly, the members of the Bloodstock Industry Committee for their efforts to ensure that the plans we have adopted shall be successfully developed.

"Although we may claim that in establishing this Research Station within the space of a few months the Trust has made rapid progress, we must realize that it will be many years before the plans can be brought to full fruition. Despite the difficulties at present associated with the building industry, we are slowly bringing the properties into use as a Research Station. Until, however, we have laboratories and equipment, it is difficult to proceed rapidly with the appointment of staff. This is unfortunate, for it will be appreciated that the successful prosecution of research depends nowadays upon the concerted efforts of many specialists in different branches of science. Suffice it to say that when fully developed, the Research Station must have several departments containing individuals who have specialized in a variety of disciplines, including those associated with work in the field. The future of the Station is to conduct serious research; it must not be regarded as a hospital. Where specific cases may assist the investigations, then the Station's staff may co-operate with the practitioner. If, at a later stage, there is a wish on the part of practitioners and owners for a laboratory diagnosis service, then we shall be happy, provided the financial support is forthcoming, to organize this service. At the moment, our particular aim is to ensure that teams of workers undertake the elucidation of some of the many problems affecting the health of the horse.

"Those needing prompt attention include reproduction troubles, diseases of foals, parasitism and mineral imbalance. Important work upon infertility and sterility has already been done in this country by Mr. Fred Day and continued by Mr. Davison and Dr. Burkhardt. You know only too well what proportion of mares do not breed or slip their foals and of how ignorant we are still of their many causes. Considerable progress has been made in their elucidation, but much still remains to be done. This work will

be continued and extended, and our studies will include both male and female.

"Diseases of foals constitute another set of problems, which collectively result in considerable loss of unknown magnitude. Everyone of you in this room must know of potentially valuable foals which have not been reared—sometimes through lack of knowledge, sometimes from preventable causes, and sometimes for reasons as yet unknown. The influence of the spring flush of grass upon mares' milk needs careful investigation if we are to prevent 'black diarrhoea' of foals, a condition which not only lowers health but sometimes causes death. This is but one aspect of the major problem of the influence of the nutrition of the mare upon the growth and development of the foal, and links up with the question of pasture management.

"Parasitic conditions of yearlings also constitute a large source of loss. Miss Russell has already made some progress in the study of the life histories of the various worms giving rise to parasitism in the horse, and we are now planning controlled paddock experiments at the Research Station on an intensive and extensive scale.

"Despite the ease and speed of movement of the modern horse, the study of the organs of locomotion in relation to training and racing offers a field of investigation which is bound to produce fruitful results.

"There is much practical experience on the feeding of the horse, but we still have extensive gaps in our knowledge of horse nutrition. Even with our present knowledge of mineral metabolism in other species, we still know comparatively little of the detailed mineral metabolism of the horse. Further research is likely to provide useful results in connection with such problems as sore shins, ringbones, sidebones and spavins. In spite of preliminary work suggesting that roaring, shivering, stringhalt and the bony diseases of the limbs arise from faulty mineral metabolism, we still do not know whether this view is scientifically accurate. Another important condition which may be connected in some way with faulty nutrition is grass disease, which still eludes scientific investigation.

"Considerable advance has been made in our understanding of the food metabolism of many species, particularly in connection with the vitamins and the changes in the various tissues. This work needs extension to the horse. Indeed, we shall not be happy until we have a modern Metabolism Chamber suitable for use with the horse. Although such a chamber would cost in the region of £20,000 to build and equip, it is certainly of vital importance to the horse industry. Through its use we could investigate many problems concerned with food digestion, the production of heat and the development of energy. With a species whose work ranges from that of the comparatively slow traction of heavy loads to the rapidity of the racehorse, this investigation is bound to yield important results. Indeed, this Metabolism Chamber will help us to extend our investigations to the positive side of health, for we have no intention of restricting our attack to the negative side of disease. Despite the excellence of the present breeds of horses, we must all agree that there is no horse so good that he cannot be better.

"A practical problem associated with training is the differing rates at which horses of similar ages under similar methods of management achieve racing condition. Undoubtedly one of the factors involved is the efficiency of the circulatory and respiratory organs, and in this connection the heart is of undoubted importance. A detailed study of the horse's heart must be undertaken, using modern techniques such as electro-cardiographic investigation."

Dr. Wooldridge then indicated that, in that short talk, he had refrained from touching upon topical matters, but had restricted his references to long-term problems of major importance: "This does not mean that we shall neglect such conditions as 'Newmarket throat' or coughing—which is now ably dealt with by veterinary clinicians; heel bug—fortunately not so important at the moment, and even 'nobbling'."

Nor did they intend to restrict their work on the Station to research, for they hoped it would also become a valuable educational centre. They aimed at developing one of the finest horse reference libraries in the world, and later to establish a suitable museum of the horse. Already, through the kindness of Mrs. Morriss, they had begun to collect books for the General Section of the Library, and would be glad to receive works which any of them could spare and which they thought would prove useful. Furthermore, they anticipated receiving visits from research workers and veterinary students and, if possible, they hoped to play their part in providing courses of an educational nature for those concerned with the management of studs, racing stables and training establishments. "When one thinks of the value of the modern thoroughbred mare and stallion, it would seem fantastic that their care should not be under the supervision of individuals of the highest qualification. Indeed, I believe there is a place for veterinary surgeons to specialize in horse management and become responsible for the more valuable studs and training centres."

It would be seen, therefore, that the work of the Trust at the Equine Research Station fell into three parts: that of long-term basic research devoted to major problems of the equine industry; that of educational courses for veterinary undergraduates and other important personnel connected with horse management; and that of a laboratory and expert diagnosis service behind the veterinary practitioner. The extent to which these three branches developed would obviously depend upon the financial support received, but the main task must be that of research.

"Finally," observed Dr. Wooldridge in conclusion, "may I say how sensitive we are to a feeling of impatience on the part of horse owners at the apparent slowness with which results are achieved from research, but I would emphasize the complexity of the problems which must be investigated. As an independent organization, I can promise you that we shall push ahead with all speed with the prosecution of our task and shall do our utmost to surmount the many difficulties that lie in the path of rapid development in an age of national regimentation and control. We believe that scientific research can only flourish to its full extent if it possesses vital independence, and it is for this reason that we believe an organization such as the Veterinary Educational Trust can 'deliver the goods' to the horse-owning community as efficiently as, if not more efficiently than, Government controlled research. A year ago, the idea of an Equine Research Station was not mooted—to-day, as a result of our collective efforts, the Station is established. It remains to each of us to do all in his power to see that this early promise is allowed to flourish. For our part, we can assure you that with your unstinted help, we will go forward with vigour and determination, and show that success comes the more easily to enterprise of a voluntary and original nature."

He thanked the Thoroughbred Breeders' Association for the opportunity of addressing them yet again, and expressed the hope that his talk would stimulate them both individually and as an Association to accord the Trust their full support.

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### Short Rations and Barren Mares

Lord Rosebery, in the course of his address, commented on the fact that in this country mares, foals, and yearlings had all been on short rations for several years. It was, he said, a curious coincidence that the French victories had occurred when an Irish breeder headed the list for the first time. An Irish-bred horse won the Derby for the first time for some years and the fastest three-year-old, The Bug, also came from Eire, and in Eire there also had never been any rationing for horses. In spite of the fact that only our best mares remained, the percentage of barren mares, which in the period 1937-40 was approximately 33·4 per cent., had risen to nearly 44 per cent. That could only come from lack of proper feeding-stuffs.

## QUESTIONS IN PARLIAMENT

### Dairy Cattle Diseases

Colonel Ropner asked the Minister of Agriculture whether he will consult the National Veterinary Medical Association in connection with his plans for initiating in 1947 a large-scale campaign to utilize scientific knowledge to the full in eradicating from the dairy herds of this country bovine tuberculosis and other diseases; whether he will indicate the present approximate annual loss caused by such diseases; what is the present cost of the campaign for eradicating the diseases; and what estimate has been made of the cost of the new campaign now contemplated.

Mr. T. Williams: In July last, a memorandum on problems associated with large-scale measures for the eradication of bovine tuberculosis was sent by my Department to farming and other organizations, including the National Veterinary Medical Association, and I shall have due regard to the views expressed by any of these organizations. No reliable estimate of the annual loss caused by diseases of dairy cattle alone is available, but in their second report, issued in 1944, the Committee on Veterinary Education in Great Britain quoted an estimate of £30 million as a minimum figure for animal diseases as a whole, the greater part of which was related to diseases of dairy cattle. The expenditure this year on the veterinary service, excluding the cost of compensation for animals slaughtered on account of foot-and-mouth disease, is estimated to be about £1 million; but it is hardly practicable to segregate the expenditure on diseases affecting dairy cattle particularly. As to the last part of the Question, I am unable at present to make an estimate, as detailed plans have not yet been formulated.

### Agricultural Research Council

Colonel Ropner asked the Lord President of the Council whether he will make arrangements for information about the activities of the Agricultural Research Council to be made more frequently available to those concerned with its work; and whether he will appoint a public relations officer to deal with the work of this council and other research bodies under his control.

Mr. H. Morrison: War-time difficulties naturally restricted the extent to which information about the activities of the Agricultural Research Council could be disseminated generally, though, as the hon. and gallant Member will, no doubt, be aware, the publication "Agricultural Research in Great Britain," was issued in 1943 and has since been reprinted, while the results of individual pieces of research continued to be published. The council now have in hand the publication as soon as possible of a report which will include reference to the work of the war years, as well as to that of the past year, and subsequently of an annual report instead of a biennial one as before the war. Every opportunity is also taken to make the practical results of agricultural research work known to a wider public through the Agricultural Departments, their advisory services and their agricultural improvement councils.

As regards the other research councils, the Medical Research Council are able to supplement their own arrangements with help from the Health Departments while the Department of Scientific and Industrial Research already have an information and intelligence division. In all the circumstances, the question of an officer jointly responsible to the three councils hardly arises.

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### Veterinary Surgeons and Jury Service

Squadron-Leader Donner asked the Secretary of State for the Home Department whether, in view of the shortage of veterinary surgeons especially in agricultural areas, he will extend the same exemption to them as regards jury service as is now given to doctors and parsons.

Mr. Ede: I would refer the hon. Member to the reply given to a Question by the hon. Member for Winchester (Mr. Jeger) on November 21st.*

*[Mr. Ede: I have no authority to issue any such instruction. Exemption from jury service is governed by statutory provisions and legislation would be required for the purpose which my hon. Friend has in mind.]

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### Vivisection (Inspectors)

Sir G. Fox asked the Secretary of State for the Home Department whether, in view of the terms of Section 10 of the Cruelty to Animals Act, 1876, he will state on what grounds he has decided that medical qualifications are essential for inspectors of animals kept for scientific purposes; and for what reason veterinary surgeons cannot be appointed under that section.

Mr. Ede: I would refer the hon. and gallant Member to the reply given to the hon. Member for Hampstead (Mr. Challen) on August 1st last.*

*[Mr. Ede: I have two main duties under the Act. One is to see that places where experiments are performed are properly inspected, and medical men are well able to do this. The other is to decide whether authority should be given for proposed experiments and, as the vast majority of the experiments are for the purpose of alleviating human suffering, an inspector without medical qualifications would rarely be in a position to give me the advice I require in this connection].

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### Safe Milk in Schools

Mr. House asked the Minister of Education what is the incidence of bovine tuberculosis among children under 15 years of age in the latest year for which figures are available; and what steps have been taken by her Department to secure a safe type of milk supply to schools.

Miss Wilkinson: I am informed by my right hon. Friend the Minister of Health that the incidence of bovine tuberculosis among children in this country is not exactly known but is estimated to be about 2,000 new cases a year. Measures are taken by the Ministry of Food to supply schools wherever possible with heat treated or tuberculin tested milk which now constitute 92·6 per cent. of the milk drunk in grant aided and independent schools. In the 18 months ended in June, 1946, 1,420 schools had their milk supply changed over to one of these types.

Mr. Hastings: Does my right hon. Friend realize that the figures she has given of the incidence of bovine tuberculosis would be considered very low by the majority of authorities?

Mr. Lipson asked the Minister of Education if she is satisfied that the instructions laid down by her for the disposal of milk rendered surplus in schools owing to children being absent from school or for any other reason, are, in fact, observed.

Miss Wilkinson: On the information so far received, I have no reason to doubt that the instructions are generally well observed, but a close watch is being kept by my Department in co-operation with the Ministry of Food.

Mr. Lipson: Have schools to make a return to the local food officer showing what happens to surplus milk?

Miss Wilkinson: Yes, full records have to be kept.

Mr. Turton: Has the right hon. Lady seen the reports in the Press about what is happening in certain schools in Wales, where milk not drunk on Monday is kept until Friday and then poured down the sink, and has she investigated these complaints?

Miss Wilkinson: I would ask the hon. Gentleman not to believe everything he reads in the Press.

Mr. Turton: But has the right hon. Lady investigated the complaints, and has she issued a categorical denial to the Press if they are unfounded?

Miss Wilkinson: If my Department or any other spent its time investigating general allegations, often made without either evidence, dates or places, they would have little time to do their ordinary work.

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### Pigs (Ear-marking)

Mr. Thomas Macpherson asked the Minister of Food if he will make arrangements to stop the present method of ear-marking pigs in Romford Market, which causes unnecessary cruelty to the animals and is objectionable to the public.

The Minister of Food (Mr. Strachey): This method of marking has been in operation since January, 1940. I am assured that it is far less painful than many of the routine operations on the farm. I am afraid that it has to be done.

Mr. Macpherson: Is my right hon. Friend aware that the screams of these unfortunate animals are most distressing to the citizens of that part? Has he explored the possibilities of using some form of indelible ink which would enable the necessary identification to be made?

Mr. Baldwin: Is the Minister aware that if one picked up a pig and gave it a kiss, it would always scream?

Mr. Strachey: I am grateful to the hon. Member for his experience. Seriously, we would very much like to find a more humane method but we are told that there is great difficulty. If the hon. Member will make a suggestion to us, we will consider it.

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### Food and Agriculture Organization

Major Legge-Bourke asked the Minister of Food His Majesty's Government's policy with regard to the suggestion of Mr. Norris E. Dodd, the U.S. representative on the Preparatory Commission of the Food and Agriculture Organization, to create a committee to deal with the development and co-ordination of national nutrition and agricultural programmes and another to consider the problems of international commodity stabilization and surplus disposal, and the use of international commodity agreements for these purposes.

Mr. Strachey: The United Kingdom Delegation attending the Preparatory Commission of the Food and Agriculture Organization supported the proposal referred to by the hon. and gallant Member. The two committees have been set up and are now at work. The Preparatory Commission will in due course consider their reports.

## NOTES AND NEWS

### Diary of Events

#### Council and Committee Meetings, N.V.M.A., in January

For the early information of members the following meetings will be held in January next:—

Jan. 9th.—General Purposes and Finance Committee (morning), Veterinary State Medicine Committee (afternoon). (Both at 36, Gordon Square.)

Jan. 10th.—Technical Development Committee at 10 a.m., Council Meeting at 11 a.m. (Both at the Connaught Rooms, Great Queen Street, Kingsway, London, W.C.2.)

Jan. 10th.—Meeting of the Association of Veterinary Teachers and Research Workers (Founder Members resident in Southern Region), at the Royal Veterinary College, N.W.1, 2.15 p.m.

**July 28th—Aug. 1st.—N.V.M.A. Annual Congress in Edinburgh.**

## N.V.M.A. ANNUAL CONGRESS, 1947.

It has been decided to hold the 1947 Congress in Edinburgh from July 28th to August 1st inclusive. It is desirable that applications for accommodation should be made as early as possible as hotels and boarding-houses are already booking for next summer.

If any members fail to obtain suitable accommodation they should get in touch with the Hon. Local Secretary, Professor A. Robertson, Royal (Dick) Veterinary College, Edinburgh, 9, who will endeavour to assist them.

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### New Appointments to the Staff of the Ministry of Agriculture

As notified in recent issues, Council, N.V.M.A., has decided that no advertisements for appointments to the veterinary staff of the Animal Health Division of the Ministry of Agriculture shall be accepted for *The Veterinary Record* pending the settlement, in a manner satisfactory to the Association, of the question of the status and salaries of the Veterinary Officers of the Division.

In the meantime, any members of the profession who may, nevertheless, contemplate applying for such posts, should these be advertised elsewhere, are requested first to communicate with the General Secretary of the Association at 36, Gordon Square, London, W.C.1.

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### Veterinary Appointments in the South African High Commission Territories

A deputation from the Overseas Services Committee of the Association, consisting of Dr. J. Carmichael, M.R.C.V.S., DIP. BACT. (LOND.), Mr. W. H. Chase, C.B.E., F.R.C.V.S., and the General Secretary, attended at the Dominions Office, Downing Street, W.1, on Wednesday, December 4th, and discussed with the High Commissioner for Basutoland, the Bechuanaland Protectorate and Swaziland (Sir Evelyn Baring, K.C.M.G.) questions regarding the position of Veterinary Officers in the High Commission Territories which the Association had raised with the Dominions Office in writing.

Sir Charles Dixon, K.B.E., Assistant Under-Secretary of State, Dominions Office, Mr. H. N. Tait and Mr. L. H. Gorsuch of the Dominions Office, and Mr. John Smith, O.B.E., M.R.C.V.S., D.V.H., Adviser on Animal Health to the Secretary of State for the Colonies, were also present.

The High Commissioner listened with keen interest to the remarks of the members of the deputation, and after the various points had been discussed he promised that the Association's representations would receive sympathetic consideration.

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### An East African Branch of the N.V.M.A.

We are glad to learn from a most interesting initial "News Letter" received from Mr. R. N. Fiennes, of Kabete, in his capacity as Corresponding Member to *The Veterinary Record*, appointed by the Kenya Veterinary Medical Association, of the formation of an East African Branch of the N.V.M.A., comprising the affiliated Associations of Kenya, Uganda and Tanganyika. The new Branch is to meet at least once a year and its organizers express the hope, most cordially endorsed by the parent Association, that it will be able materially to support and assist the efforts of the N.V.M.A. Overseas Committee on behalf of members of the profession in these Territiories. Our Correspondent reports that, in all three, great interest is being taken in this development and that in Kenya, at any rate, the Division has received official recognition in the form of consultation on various points by the Government.

#### Mr. Daubney's Appointment

Mr. Fiennes takes the opportunity to forward us a cutting from the *East African Standard* concerning the appointment (recently announced in our columns) of Mr. R. Daubney as Chief Pathologist and Adviser to the Egyptian Government on technical aspects of veterinary policy, and on behalf of his colleagues in the department at Kenya, which has thus lost its Director of Veterinary Services, to congratulate him on this important appointment and wish him all success in his new sphere.

In the course of a tribute to Mr. Daubney's work in Kenya the *Standard* observes: "Mr. Daubney first came to Kenya in 1925 when he was appointed to the staff of the Veterinary Research Laboratory at Kabete. His outstanding work in connection with rinderpest and cattle and sheep diseases of the virus group brought him promotion six years later, when he succeeded Mr. James Walker as Director of the Colony's Veterinary Research Laboratory.

"When the Veterinary Department was divorced from the Agricultural Department, and Mr. Brassey-Edwards retired, Mr. Daubney became the first Director of Veterinary Services (the new title) for Kenya.

"In the succeeding years he was in great measure responsible for the notable progress which was made in veterinary research work by the Department and which resulted in the outstanding place in Colonial Veterinary Services gained by the Kenya Department.

"It was also largely due to his administrative ability and the notable work done there that Kabete was selected as the place for the Central Veterinary Research Department of the East African territories.

"In recognition of his work, Mr. Daubney was awarded in 1941, the Dalrymple-Champneys Cup and Medal by the Council of the National Veterinary Medical Association. This was the first time the award had been made to a member of the Colonial Veterinary Service. Mr. Daubney is a Companion of the Order of St. Michael and St. George and an Officer of the Order of the British Empire.

"Mr. Daubney's work is a solid contribution to the stability and prosperity of white settlement in Kenya for it was in no small measure due to him that the livestock and dairy industries have made such steady progress in the fight against the livestock diseases of Africa."

Mr. Fiennes' reference to this matter concludes: "Mr. Daubney's retirement means that the Department has now no Director or Deputy Director, Field Services, and there is still no Director of the Central Research Institute. Moreover, both field and laboratory services are much under strength. We all look forward to the time when conditions shall have been improved."

Our Correspondent's letter, which is dated October 9th, also embodies the following further interesting item: "Important visitors last month were the Members of the Inter-Universities Commission, who visited the Veterinary School of Makerere College, now transferred from Entebbe to Kabete. We were especially pleased to welcome Professor J. G. Wright, whose brains we were able to pick about the formation of our Branch. He has given us some very sound advice on the reorganization of veterinary education and we are going ahead with new plans."

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### Fiftieth Anniversary of the Death of Pasteur

#### International Congress in Paris

The life-work of Louis Pasteur marks the beginning of a great epoch in the progress of human welfare. The 50th anniversary of his death has just passed, and to mark the event an International Congress was held in Paris from November 18th to 25th, 1946, under the auspices of the French Government.

About 60 scientists from 20 foreign countries were personally invited to attend the Congress; these were chosen as representing the three great fields in which Pasteur's activities lay, chemistry, medicine and veterinary science.

The British group included Sir Alexander Fleming and his associates Sir Howard Florey and Dr. Ernest Chain, to whom the Nobel Prize in Medicine was awarded jointly for their work on the discovery of penicillin and its antibiotic properties.

British Veterinary Science was represented by Dr. Russell Greig, who was chosen President of the Veterinary Section, and Dr. I. A. Galloway, who in his address to the Section gave a résumé of Pasteur's work in its relation to animal disease research.

Apart from the scientific meetings, which had their sessions in the College of France, receptions to the congressionists were given by the Institute Pasteur, the Sorbonne, the Académie de Médecine and the Municipality of Paris, culminating in a deeply impressive *séance solennelle* in the Grand Amphitheatre of the Sorbonne at which were present the President of the French Republic, M. Bidault, members of his Ministry, of the Corps Diplomatique and of the Académie de France.

The congressionists then made a pilgrimage to the Jura where they visited Dole, the town of Pasteur's birth, and Arbois, where he passed much of his life and where his classic experiments on "wine disease" were conducted. Civic receptions were accorded by these towns where wreaths were laid by the Congress at the monuments to Pasteur.

In its purpose, that of paying devout tribute to the character and work of a very great man and of re-instilling among modern scientists the *Inspiration Pasteur*, the Congress was a complete achievement.

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## ROYAL COLLEGE OF VETERINARY SURGEONS

### Addresses of Members

The Registrar is seeking the addresses of the undermentioned members of the College whose whereabouts have been unknown for some time. Any information as to their present, or even recent, addresses will be welcomed by the Registrar, R.C.V.S., 9, Red Lion Square, London, W.C.1.

Adams, J. E. (Kingsbridge); Beck, D'A. S. (late R.A.V.C.); Burke, J. A. (Cranleigh); Crapp, A. (London); Custance, H. (Leicester); Davis, R. T. (Southampton); Devine, E. J. (London); Fox, H. P.

(London); French, J. A. (Hull); Gillett, E. S. (Malmesbury); Hewson, F. (Buntingford); Hyland, F. J. (Long Sutton); Jones, A. H. (Exmouth); Kilpatrick, W. A. (Canada); Leonard, H. S. (Australia); Macdonald, R. A. S. (N. Rhodesia); Maxwell, H. M. (London); Mullane, F. J. (London); Murison, R. E. (Boston, Lincs.); O'Brien, F. N. (India); Rice, J. P. (Belfast); Smith, W. R. (Doncaster), and Sproston, H. (Canada).

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## PERSONAL

*Marriages.*—Hindle—Tullett.—The marriage took place on December 11th, 1946, at St. Laurence Church, Upminster, of Captain J. J. R. Hindle, M.R.C.V.S., only son of Mr. and Mrs. J. N. Hindle, of Springfield Court, Upminster, to Winifred Margery Tullett, only daughter of Mr. and Mrs. C. E. Tullett, of Rushmere Avenue, Upminster.

Thomson—Scott.—At Queen's Park Baptist Church, Glasgow, on December 3rd, 1946, W. (William) Thomson, M.R.C.V.S., of Paisley, to Janet (Netta) Scott, of Giffnock, Renfrewshire.

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*Forthcoming Marriage.*—Phillips—Osborn.—The engagement is announced between Captain Richard Noel Phillips, Royal Army Veterinary Corps, son of Mr. and Mrs. R. Phillips, of Dulwich and Joyce Osborn, M.R.C.V.S., of Wallasey, daughter of Dr. and Mrs. S. Osborn, of Ipswich.

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*The Varsity Match.*—The Cambridge rugby XV have had a good season under their veterinary-student captain, Michael R. Steele-Bodger, the English International forward, and steady improvement brought hope to their partisans that, in the crucial game at Twickenham, they might spring a big surprise by lowering the colours of undefeated Oxford, the recognized "team of the year." The Dark Blues carried too many heavy guns for that, but the record crowd for this fixture on Tuesday, acclaimed both Oxford's victory by 15 points to 5 and the splendid fight put up by the losers. In this match, in the words of *The Times*, Steele-Bodger "had the double honour of leading the bravest of forlorn hopes and of scoring his side's only try by as good a piece of following up as one could wish to see." Veterinary interest in a memorable game was enhanced by the fact that it was refereed by Mr. R. H. Lambert, M.R.C.V.S., of Dublin, who handled the strenuous encounter most capably. Michael Steele-Bodger joins his brother Alasdair, who has represented Cambridge at soccer, at the "Dick" College next term.

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## STATE VETERINARY RESEARCH INSTITUTE FOR CO. DUBLIN

Moving a supplementary estimate for his Department, Dr. Ryan, Minister for Agriculture, in the Dail, on November 27th, said he was asking for £15,000 in connection with the establishment of a veterinary research institute at Clondalkin. A sum of £7,000 had been included in the estimate for 1945-46 for veterinary research, but in that year no land suitable for the purpose had become available. A suitable farm of 380 acres had been purchased for £22,000. It would be necessary to erect special buildings. A sum of £12,000 had been provided and a further £10,000 was needed to complete the purchase, and £5,000 for equipment and implements. The institute would be run in conjunction with the existing research laboratory and new work undertaken.

In the course of the ensuing debate, Mr. J. Hughes said that the establishment of a veterinary research farm would be of great benefit to livestock breeders, and the cost, whatever it was, would be returned a hundred-fold. An efficient veterinary service was an essential corollary to the provision of a research farm.

Mr. P. J. Halliden said the Government had been very lax in the matter of veterinary research, particularly in regard to contagious abortion and mastitis.

Dr. Ryan, replying, said the veterinary research section would be extended, but sufficient laboratory facilities would not be available for a year or two.

The vote was agreed to.

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In this connection, the *Irish Press* observes that the purchase of the late Mr. Walter J. Walsh's farm at Kingswood, Clondalkin, ends satisfactorily a search for a suitable property which the Department began soon after the Committee on Post-Emergency Agricultural Policy recommended the establishment of the Institute, and proceeds: "The Department has now taken possession of Kingswood which, situated six miles from the city, is regarded by experts as representing an ideal location for the Institute building. It also provides the adequate land space the Committee had in mind when it recommended choice of a farm not less than 200 acres to provide for laboratories and animal accommodation.

"Establishment of the Institute will mean early implementation of the most important of the Committee's recommendations for reorganization of veterinary services, which have been accepted by Dr. Ryan, Minister for Agriculture.

On the basis of cost estimates made by the Committee, provision of Institute and farm will represent a capital outlay of £75,000. This estimate took into account the amount likely to be realized from the sale of the laboratory premises and 25-acre farm at Thorndale, Drumcondra, which will be replaced by the new Institute. There have been frequent complaints from the veterinary profession of the inadequacy of laboratory and livestock accommodation at Thorndale and the Committee proposed it should be vacated when the Institute is finally established. The Institute will also mean that it will no longer be necessary to set aside a portion of the State farm at Lusk, Co. Dublin, for research work. Maintenance of the Institute, additional staff and the preparation of vaccines and sera there will, it is estimated, cost about £15,000 each year.

"The general staffing and administration of the Institute are matters that have yet to be decided by the Department, but it is likely that all officers will be engaged on a full-time basis. On the basis of the Committee's recommendations, the staff will include, not only veterinarians, but biochemical and bacteriological personnel. Responsible for the general administration of the Institute and farm will, it is proposed, be a Chief Research Officer, and there will be complete collaboration, in research matters, between the Institute and the Professors of the Veterinary College.

"Part of the work of the Institute will be concerned with the production of vaccines and sera required for the treatment of stock and which, the Committee proposed, should be provided free of charge by the State."

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## THE VETERINARY COLLEGE OF IRELAND

### Annual Prize Distribution

The annual Prize Distribution took place at the Veterinary College of Ireland, Ballsbridge, Dublin, on October 29th. The Principal, Professor T. G. Browne, M.Sc., M.R.C.V.S., occupied the chair and presented the prizes to the students.

Following the distribution of prizes, Mr. B. G. Fagan, B.A., B.Sc., F.I.C., Public Analyst, delivered a very interesting and instructive lecture on "Analysis for Poisons in Animals."

Following is the list of prizewinners:—

Class Prize Awards: Session 1945-46

*Final Year*

J. J. Finn: Silver Medal, Surgery; Bronze Medal, Medicine.
I. T. Nicholson: Silver Medal, Medicine; Bronze Medal, Surgery.
R. Lynch and D. H. Monaghan: Bronze Medal, Meat Inspection (Tie).
P. J. Daly: Silver Medal, Clinical Medicine and Surgery.
T. Murphy: Bronze Medal, Obstetrics.

*Fourth Year*

W. J. Prendergast: Silver Medal, Pathology; Silver Medal, Parasitology.
H. Martin: Bronze Medal, Pathology.
G. A. Alford: Bronze Medal, Parasitology.

*Third Year*

D. Loughlin: Silver Medal, Senior Anatomy; Silver Medal, Materia Medica; Silver Medal, Hygiene.
E. J. Sweeney: Bronze Medal, Materia Medica; Bronze Medal, Hygiene.
J. G. McIvor: Bronze Medal, Senior Anatomy.

*Animal Management*

J. J. Fanning: Silver Medal, Animal Management.

*Second Year*

P. J. Cahill: Silver Medal, Junior Anatomy.
C. A. Murdock: Bronze Medal, Physiology.
J. A. Stephenson: Bronze Medal, Junior Anatomy.

*First Year*

J. P. O'Connor: Silver Medal, Junior Anatomy (first year).
J. H. McAlinden: Bronze Medal, Junior Anatomy (first year); Bronze Medal, Biology.
J. J. McBride: Bronze Medal, Chemistry (Practical).

*Special Awards*

Mettam Memorial Prize: D. O'Gorman.
Kehoe Memorial Prize: W. J. Prendergast.
Freeman Medal: J. T. Nicholson.
Evans Scholarship: W. J. Prendergast.
Veterinary Medical Association of Ireland Silver Medal: J. T. Nicholson.

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*Pharmacy and Poisons Act, 1933.*—The Stationery Office have reprinted the "Memorandum on the Provisions of the Pharmacy and Poisons Act, 1933, affecting Medical, Dental and Veterinary Practitioners, Hospital Dispensaries and Similar Institutions," and the "Memorandum on the Provision of the Pharmacy and Poisons Act, 1933, Affecting Shops other than Chemist' Shops." These memoranda were first published in 1936. The price of each is 3d. net.

### ADDRESSES OF DISEASE-INFECTED PREMISES

The list given below indicates, first, the county in which are situated the premises on which disease has been confirmed, followed by the postal address and date of outbreak.

FOOT-AND-MOUTH DISEASE:

*East Sussex.*—Wheel Farm, Westfield, Battle, Sussex (Dec. 4th).

SWINE FEVER:

*Derbyshire.*—Tongue Lane, Fairfield, Buxton, Derbyshire (Dec. 5th).

*Lincs.* (*Kesteven*).—Rose Villa, Grantham Road, Waddington, Lincoln (Dec. 6th).

SHEEP SCAB:

*Denbighshire.*—Hendre, Lanfair D.C., Denbighshire (Dec. 5th).

# CORRESPONDENCE

***The views expressed in letters addressed to the Editor represent the personal views of the writer only and must not be taken as expressing the opinion or having received the approval of the N.V.M.A.***

**Letters to the Editor should reach the Office not later than by the first post on Monday morning for insertion in following Saturday's issue.**

**Notice to Correspondents**

**The Editorial Committee regrets that, the paper supply situation having deteriorated, it has become necessary to ask correspondents again to accept a limitation on the length of letters submitted for publication. Accordingly, contributors to our Correspondence Columns are requested to note that, until further intimation is made, their communications must not exceed 350 words.**

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## PHENANTHRIDINIUM COMPOUNDS IN TRYPANOSOMAL INFECTIONS

Sir,—I have been interested to read in your issue of September 7th the report of Randall and Beveridge on toxic effects arising from the use of phenanthridinium 1553 in small dosage. The matter is of great importance, since we have been informed that the manufacture of phenanthridinium 897 is being discontinued. This product is less irritant to the tissues and no trouble has been reported from photosensitization following its use.

Frankly, I believe that the authors, in recommending a dose so low as 1 mg. per kilo of body weight, underestimate the danger of using sub-curative doses in trypanosomal infections. The extensive work of Warrington Yorke and others on the production of drug-fast strains suggests from a theoretical aspect the danger of using small doses of trypanocidal drugs. In actual practice, treatment with small doses appears to drive the parasite "underground" and, although life is prolonged, cure is then very difficult indeed; this is equally true of the antimonials which do not create drug fastness. The same is encountered with Babesia infection of dogs and with malaria in human beings. To be of use in the hands of persons inexperienced in judging the weights of animals, it is my experience that at least double the minimal curative dose of a drug must be able to be given with safety. Different workers disagree over the M.C.D. with 1553; whereas Bell found it to be 0·8 mg. per kilo, Barnett estimates that 2 mg. per kilo are necessary to effect cure with certainty. Browning and Calver find that the drug is not equally effective for all strains of *T. congolense* and it has been suggested that different samples vary in their potency. I am myself at present attempting treatment of a valuable Guernsey bull dying of chronic trypanosomiasis following a dose given by the owner of about 1·5 mg. per kilo of phenanthridinium 897 followed by sub-curative doses of stibophen. It seems doubtful whether, following this treatment, anything can be done to save the animal.

The use of small doses of trypanocidal drugs can only lead to the creation of incurable chronic trypanosome cases which may act as reservoirs of infection.

The demonstration of photosensitization following so small a dose of 1553 as 2 mg. per kilo is indeed surprising and it is desirable that the authors should publish, for proper appraisement, full details of their experiments, together with the numbers of animals used. Photosensitization was first recognized by F. R. Bell, working at Entebbe, following, if I remember rightly, a dose of 4 to 5 mg. per kilo. The writer diagnosed it in Cronly's cases, to which reference is made by Randall and Beveridge, but on investigation he was unable to satisfy himself that the recommended dose of 2 mg. per kilo had not been considerably exceeded by native assistants, who administered 2 mg. per lb. instead of per kilo. The reliability of the statement regarding these field trials is, therefore, seriously open to question.

While agreeing that 1553 is not an ideal preparation—we prefer 897 in Kenya—good results have been reported from its use in many parts, especially the Rhodesias; it is now being used extensively in South Africa in an attempt to stem the spread of "fly disease" in Zululand. It is most important that the present report should be clarified and confirmed. Meanwhile, it seems premature to discontinue production of 897.

Yours faithfully,
R. N. FIENNES.

Department of Veterinary Services,
Veterinary Research Laboratory,
P.O. Kabete.
*November 12th*, 1946.

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## THE VOTE

Sir,—Consideration of the events at the last and at other recent annual general meetings of the Association suggests that all is not so well as it might be in the matter of securing decisions on matters which are put to the vote. Actually decisions are made by the small minority (about 10 per cent.) of the members who personally attend and, although one may delegate one's vote by proxy, obviously this cannot be done unless persons offer themselves as protagonists and antagonists for and against a stated proposition in advance of the meeting sufficiently early to give time for proxy voting. This way of obtaining a true representative vote is not used, and I suggest that this is a pity in view of the important matters which have been on the agenda of the annual general meetings of recent years. One would at least like to feel that a decision made was unobjectionably a majority one.

Yours faithfully,
J. TWEEDALE EDWARDS.

Wilmslow.
*November 26th*, 1946.

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## R.C.V.S. COUNCIL ELECTION

Sir,—I am directed by the members of the Tanganyika Territory Division to inform candidates for election to the Council of the Royal College that we would support the candidature of any Member or Fellow who would undertake to present the interests and views of the Colonial Empire in the Council. It is suggested that candidates to whom this idea commends itself might, by stating their views in *The Veterinary Record*, command a far greater number of votes than this Division alone could offer.

Yours faithfully,
EDWARD F. PECK,
*Hon. Secretary Treasurer.*

The Tanganyika Territory Division of the
National Veterinary Medical Association,
Mpwapwa,
*September 30th*, 1946.

## DISEASES OF ANIMALS ACTS, 1894 TO 1937, AND AGRICULTURE ACT, 1937 (PART IV).

**Summary of Returns of Confirmed Outbreaks of Scheduled (Notifiable) Diseases**

| Period | Anthrax | Foot-and-mouth | Parasitic Mange* | Sheep Scab | Swine Fever |
|---|---|---|---|---|---|
| Nov. 1st to 15th, 1946 ... | 5 | 1 | — | 11 | 4 |
| Corresponding period in— | | | | | |
| 1945 ... | 7 | 4 | — | 5 | 22 |
| 1944 ... | 9 | 22 | — | 29 | 65 |
| 1943 ... | 9 | — | 1 | 20 | 34 |
| Total Jan. 1st to Nov. 15th, 1946 ... | 82 | 35 | 7 | 85 | 336 |
| Corresponding period in— | | | | | |
| 1945 ... | 110 | 123 | 6 | 108 | 867 |
| 1944 ... | 163 | 156 | 7 | 206 | 1,265 |
| 1943 ... | 253 | 15 | 7 | 195 | 481 |

NOTE.—The figures for the current year are approximate only.
* Excluding outbreaks in Army Horses.